HENKE ALL-HYDRAULIC WING
AHW 42BH & 66BH, JD G T4
FOR JOHN DEERE "G" SERIES GRADERS with JD MANUAL HYDRAULICS (Grade Pro Not Included)

Serial Number: _____

PARTS BOOK AND INSTALLATION MANUAL
VERSION 3.2, APRIL 2015

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Introduction

Thank you for your purchase of a Henke All Hydraulic Wing for your John Deere "G" Series motor grader. The bolt-up/bolt-up attaching structure design of this wing allows greater rotation of the main grader blade than other designs, which improves snow moving capability. The All Hydraulic Wing consists of four main subassemblies:

1. Wing Post and Attachment Assemblies

2. Moldboard and Pushbeam Assemblies

3. Rear Attachment Assembly (either: Elevating Rear, Fixed Rear, Manually Elevating Rear, or Rear Ripper Attachment)

4. Hydraulic Hoses and Fittings

Before beginning your installation, please check that all of the appropriate ship-loose parts and hardware listed in Table 1 was received. In the unlikely event that any parts are missing, please contact Henke Manufacturing Corporation for replacements.

The cutting path, defined as the distance perpendicular to the motion of the vehicle, of the snow wing is approximately 80% of the moldboard length. Therefore, an AHW-12' would have a cutting path of almost 10 feet.

The parts lists for the AHW JD "G" snow wing are listed in Tables 2 thru 12 (if applicable). These lists are important and should be referred to when ordering replacement parts from your local dealer or Henke Manufacturing Corporation. The parts diagrams for the snow wing are shown in Figures 1 thru 7.

This Product Manual should be read in its entirety before using your Henke AHW JD "G" snow wing to minimize mounting problems. For customer service, replacement parts, or answers to questions about your Henke plow, please call Henke Manufacturing at (913) 682-9000.

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SAFETY SECTION

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SAFETY

GENERAL SAFETY INSTRUCTIONS AND PRACTICES

A careful operator is the best operator. Safety is of primary importance to the manufacturer and should be to the owner/operator. Most accidents can be avoided by being aware of your equipment, your surroundings, and observing certain precautions. The first section of this manual includes a list of Safety Messages that, if followed, will help protect the operator and bystanders from injury or death. Read and understand these Safety Messages before assembling, operating or servicing this Implement. This equipment should only be operated by those persons who have read the manual, who are responsible and trained, and who know how to do so responsibly.

The Safety Alert Symbol combined with a Signal Word, as seen below, is used throughout this manual and on decals which are attached to the equipment. The Safety Alert Symbol means: "ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!" The Symbol and Signal Word are intended to warn the owner/operator of impending hazards and the degree of possible injury faced when operating this equipment.

Practice all usual and customary safe working precautions and above all---remember safety is up to YOU. Only YOU can prevent serious injury or death from unsafe practices.

⚠ DANGER Indicates an imminently hazardous situation that, if not avoided, WILL result in DEATH OR VERY SERIOUS INJURY.

⚠ WARNING Indicates an imminently hazardous situation that, if not avoided, COULD result in DEATH OR SERIOUS INJURY.

⚠ CAUTION Indicates an imminently hazardous situation that, if not avoided, MAY result in MINOR INJURY.

Important Identifies special instructions or procedures that, if not strictly observed, could result in damage to, or destruction of the machine, attachments or the environment.

NOTE: *Identifies points of particular interest for more efficient and convenient operation or repair.* (SG-1)

READ, UNDERSTAND, and FOLLOW the following Safety Messages. Serious injury or death may occur unless care is taken to follow the warnings and instructions stated in the Safety Messages. Always use good common sense to avoid hazards. (SG-2)

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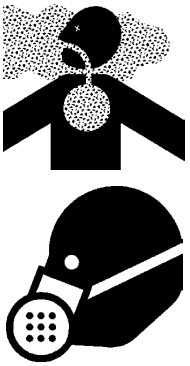
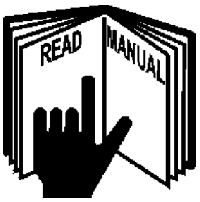
⚠WARNING Repeated or substantial breathing of hazardous dusts, including crystalline silica, could cause fatal or serious respiratory disease including silicosis. Concrete, masonry, many types of rock, and various other materials contain silica sand. California lists respirable crystalline silica as a substance known to cause cancer. Operation of this equipment under certain conditions may generate airborne dust particles that could contain crystalline silica. In those conditions, personal protective equipment including an appropriate respirator must be used. If excessive dust is generated, a dust collection or suppression system should also be used during operation. (SG-41)



⚠PELIGRO Si no lee ingles, pida ayuda a alguien que si lo lea para que le traduzca las medidas de seguridad. (SG-3)

⚠DANGER Never operate the Snow Plow until you have read and completely understand this Manual, the Truck or Power units Operator's Manual, and each of the Safety Messages found in these Manuals and those affixed to the Snow Plow, Truck, or Power units and its components. Learn how to stop the power unit engine suddenly in an emergency. Never allow inexperienced or untrained personnel to operate the Truck or Power unit and Snow Plow without supervision. Make sure the operator has fully read and understood the manuals prior to operation. (SPNG-4)



In addition to the design and configuration of this Snow Plow, including Safety Signs and Safety Equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence, and proper training of personnel involved in the operation, transport, maintenance, and storage of the machine. Refer also to Safety Messages and operation instruction in each of the appropriate sections of the Truck or Power unit Manuals. Pay close attention to the Safety Signs affixed to the Snow Plow. (SNPG-5)

PARTS INFORMATION

HENKE Snow Plows use balanced and matched system components for plows, carriers, and other components. These parts are made and tested to HENKE specifications. Non-genuine or "will fit" parts do not consistently meet these specifications. The use of non-genuine or "will fit" parts may reduce Snow Plow performance, void HENKE warranties, and present a safety hazard. Use genuine HENKE parts for economy and safety. (SNPG-6)

SEE YOUR HENKE DEALER

⚠WARNING Always maintain the safety signs in good readable condition. If the safety signs are missing, damaged, or unreadable, obtain and install replacement safety signs immediately. (SG-5)

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⚠ DANGER

All Safety Shields, Guards and other Protective Safety devices should be used and maintained in good working condition. All safety devices should be inspected carefully at least daily for missing or broken components. **NEVER REMOVE PROTECTIVE SHIELDS AND GUARDS! NEVER MODIFY OR CUT PROTECTIVE SHIELDS OR GUARDS!** When shields or guards are removed to access areas for maintenance, they must be replaced and be in good condition before operating. Missing, broken, or worn shields, guards, and other protective devices must be replaced at once and prior to operation to reduce the possibility of injury. (SNPS-02)

⚠ WARNING

The Snow Plow power unit should be equipped with a fire extinguisher, rated for all fires, in an accessible and visible area. The fire extinguisher should be inspected routinely by a certified inspector for operational use and replaced as needed. Never obstruct access to the fire extinguisher. (SNPS-6)

OPERATOR SAFETY INSTRUCTIONS AND PRACTICES

⚠ DANGER

NEVER use drugs or alcohol immediately before or while driving or operating the Snow Plow. Drugs and alcohol will affect an operator's alertness and coordination and therefore affect the operator's ability to operate the Equipment safely. Before operating the Equipment, an operator on prescription or over-the-counter medication must consult a medical professional regarding any side effects of the medication that would hinder their ability to operate the Equipment safely. **NEVER** knowingly allow anyone to operate this Equipment when their alertness or coordination is impaired. Serious injury or death to the operator or others could result if the operator is under the influence of drugs or alcohol. (SNPD-3)

⚠ WARNING

Always wear OSHA approved Personal Protective Equipment (PPE) while operating, servicing, repairing, and/or cleaning the Equipment. PPE is designed to provide bodily protection during such activities.

Personal Protective Equipment includes:
-Protective Eye Wear
-Steel Toed Safety Footwear
-Gloves
-Hearing Protection
-Close Fitted Clothing
-Hard Hat-When working around a raised hopper.
-Respirator-Depending on conditions and material being swept or cleaned.

Specialized protective equipment may be required if dangerous or hazardous material is being moved by the plow. (SNPD-4)

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⚠ CAUTION Prolonged operation of the Snow Plow ma y cause operator boredom and/or fatigue affecting the safe operation of the Snow Plow and Truck or Power unit. It is recommended that the op erator take scheduled work breaks to help prevent these potentially impaired operating conditions. If p ossible, completely shut down th e Equipment, exit the cab and move around stretching your arms and legs. Never operate the Equipment in a fatigued or bored mental state that impairs proper and safe Equipment operation. (SNPD-5)

⚠ CAUTION **PROLONGED EXPOSURE TO LOUD NOISE MAY CAUSE PERMANENT HEARING LOSS!** Equipment operation can o ften be noisy enough to cause permanent hearing loss. We recommend that you always wear hearing protection if the noise in the Operator's position exceeds 80db. Noise over 85db over an extended period of time wil l cause severe hearing loss. N oise over 90db adjacent to the Operator over an e xtended period of time will cause permanent or tot al hearing loss. ***Note:*** *Hearing loss from loud noise [from sweepers, chain saws, radios, and other such sources close to the ear] is cumulative over a lifetime without hope of natural recovery.* (SNPD-6)

⚠ CAUTION Prolonged operation of the Equipment in cold weather may cau se operator hypothermia affecting the safe operation of the Snow Plow and Truck or Power unit. It is recommended that the operator wear appropriate clothing take scheduled work breaks to help prevent these potentially impaired operating conditions. If pos sible, completely shut down the Equipment, exit the cab and warm the body in a properly heated area. Never operate the Equipment in a fa tigued or impaired mental state that effects the proper and safe Equipment operation. (SNPD-8)

⚠ WARNING Use both hands for support when getting on and off the truck or power unit. Use handles and steps on the equipment for support when boarding. Never use the Truck or Snow Plow control levers for support when boarding the equipment. (SNPO-01)

⚠ WARNING Use available truck or power unit handles and steps to exit th e operator's station. Make sure you have solid footing before stepping down. Be car eful of your step and use extra caution when mud, ice, snow, or other matter has accumulated on the steps or handrails. Never rush to exit or jump off the truck or power unit. (SNPO-02)

⚠ DANGER Do not attempt to mount the Truck or Power Unit while the machine is moving. Never attempt to mount a run away Snow Plow. Serious injury or death m ay occur from being run over by a moving Truck, Power Unit, or Snow Plow. (SNPO-03)

⚠ DANGER BEFORE leaving the operator's seat, always engage the parking brake and/or set the Truck's or Power Unit's transmission in the park position, stop the engine, remove the key, and wait for all moving parts to stop. Never dismount a Truck or Power Unit that is moving or while the engines are running. Op erate the equipment controls from the Op erator's seat only. (SNPO-04)

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⚠WARNING Always wear a seat belt while driving the equipment during operation and transport. Serious injury or even death could result from falling from the operator's station or from being involved in a collision. (SNPO-05)

⚠ DANGER Start the engines only when seated and belted in the operator's seat. Operate the equipment controls only while properly seated with the seat belt secured around you. Inadvertent movement of the power unit or attachment components may cause serious injury or death to the operator and passersby. Read the truck or Power Unit operator's manuals for proper starting instructions. (SNPO-06)

⚠ DANGER Do not operate, or perform maintenance to, the Equipment while wearing loose fitting clothing. Entanglement of loose clothing with the rotating elements can result in serious injury or death. Stay clear of all rotating elements at all times. (SNPD-7)

⚠ DANGER Operate only in conditions where you have clear visibility of the area in daylight or with adequate artificial lighting. Never operate in darkness of foggy conditions where you cannot clearly see at least 50 feet in front and to the sides of the equipment. Make sure that you can clearly see and identify passersby, steep slopes, ditches, drop-offs, overhead obstructions, power lines, oversized debris and foreign objects. If you are unable to see these types of items, discontinue operation until visibility improves. (SNPO-8)

⚠WARNING When transporting the Snow Plow between locations, follow all local traffic laws and regulations. (SNPO-10)

⚠WARNING Operate at a speed that allows you to safely operate and control the Truck and Snow Plow. Safe plowing speed depends on street condition and the type and amount of debris being moved. Slow down for corners, curbs, parked cars, protruding signs and other obstacles. Use slow traveling speeds when operating on or near steep slopes, ditches, drop-offs, overhead obstructions, power lines, or when debris and foreign objects are to be avoided. (SNPO-13)

⚠WARNING Do not operate the Equipment if excessive vibration or noise exists. Shut down the equipment and the Truck or Power Unit engine. Inspect the Equipment to determine the source of the vibration or noise. If parts are loose, damaged, or missing, replace them immediately. Do not operate the Equipment until all necessary repairs have been performed. To reduce the possibility of property damage, serious injury, or even death, never operate the Equipment with missing or damaged components. (SNPO-16)

⚠WARNING Never attempt to plow debris that is too large for the Snow Plow (oversized objects such as broken limbs and discarded tires). Such objects may damage the snow plow components and cause serious mechanical damage to the equipment. If possible, carefully place such objects out of the Snow Plow and traffic path until properly removed by another means. (SNPO-17)

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⚠WARNING Unplowed snow, piled ice and debris, and snow drifts left behind the equipment might pose a driving hazard to vehicle traffic colliding with the debris or losing traction on the material. It is recommended to post warning signs alerting driver's of the equipment operation presence and the need to reduce vehicle speed. If such hazards are left behind following the Snow Plows passage, the area should be plowed a second time and any remaining hazards removed by an alternative method. (SNPO-19)

⚠WARNING Use extreme caution when lowering the Snow Wing. Make sure no bystanders are close by or underneath the wing while lowering. Allow ample clearance around the equipment when lowering or raising the wing. Use extreme caution around obstructions including bystanders, passersby, curbs, buildings, and other property. Use the Truck's or Power Unit's horn to warn of danger when the wing is being lowered. Lower wing slowly and carefully. Sudden or unexpected dropping of wing could result in serious injury. (SNPO-24)

⚠ DANGER Do not allow the Snow Plow to come in contact with potentially dangerous and/or hazardous material. Such hazards may include, but are not exclusively limited to, the following:

- Fire Hazards- Fuel spills, burning material,
- Chemical Hazards- Chemical spills, discarded chemical containers, batteries,
- Biological Hazards- Decaying Carcasses, BioMedical Waste,
- Radioactive Hazards-Radioactive Waste, Radioactive Material,
- Carcinogenic Materials-Asbestos,
- Corrosive Materials-Batteries, Acids and Bases.

In most areas, these types of material require special handling requirements for safe and proper disposal and should not be plowed by the Snow Plow, nor can they be disposed of in a general landfill site like most swept waste. Contact the appropriate authority for the collection and disposal requirements of such dangerous and/or hazardous material. (SNPO-25)

⚠ DANGER Always wear required OSHA approved Personal Protective Equipment (PPE) when coming in contact with and removing potentially dangerous and hazardous material that has collected on the Snow Plow equipment or which is obstructing one or more components. Pay close attention to dangerous and hazardous material including, but not exclusively limited to, chemicals, decaying carcasses and sharp objects. (SNPO-26)

⚠WARNING Verbal communication near a Truck or Power Unit and Snow Plow is difficult and dangerous. Operating instructions and directions should be made prior to starting the equipment. Unclear and misunderstood communication may lead to operator and bystander injury or death and equipment damage. If communication by the operator is necessary, completely shutdown and exit the equipment. Never allow anyone to approach the equipment while in operation. (SNPO-28)

⚠ DANGER Never allow children to play on, under, or around the Truck or Power Unit nor allow children to operate equipment controls. Children can slip or fall off the equipment and be injured or killed. Children can cause the equipment components to shift or fall crushing themselves or others. (SNPO-29)

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⚠WARNING Allow passengers only in situations where their presence is involved in the operation (operator training, supervision, maintenance inspection). Never carry passengers whose presence distracts from the safe operation or transport of the equipment. Passengers must be seated securely and belted in the cab's passenger seat. Never allow any person to ride on any other location of the Truck, Power Unit or Snow Plow during operation or transport. (SNPO-30)

⚠WARNING Extreme caution should be used by the operator when operating near passersby. Stop snow plowing if a passerby comes within 25 feet of the plow to prevent possible passerby injury or death from being struck by the equipment or from a thrown object. (SNPO-31)

⚠ CAUTION Under certain conditions, the Snow Plow is capable of propelling objects up to 75 feet. Be extremely careful when plowing at higher speeds and hitting large dense objects, such as rocks, chucks of frozen ice, metal objects, broken glass, or other solid objects that might become propelled and cause bodily injury to passersby or damage to property such as windows and vehicles. (SNPO-32)

⚠WARNING Make sure that no bystander, animal or obstruction such as a vehicle, building, or street sign are within the width of the Snow Plow. The design of the Snow Plow may impair the operator vision when operating. Use extreme caution to ensure that the Snow Plow is not driven into the path of pedestrian or vehicle traffic. Serious injury or death and property damage could result from running into, being crushed by, or run over by a Snow Plow. (SNPO-33)

⚠ DANGER Make sure no bystanders or animals are within 25 feet of the equipment basket when dumping contents from or cleaning the Snow Basket. Bucket contents, which may exceed several thousand pounds, could fall and crush a bystander or an animal resulting in possible injury or death. (SNPO-34)

⚠WARNING On fully assembled unit, do not remove the wing retaining chain until hoses are attached to the power unit and the wing folding cylinders have been filled with oil. Lower wings slowly and carefully. Keep bystanders clear of area when lowering wings. Sudden or unexpected dropping of wing could result in serious injury. (SNPO-36)

⚠ DANGER Use extreme caution when operating the Equipment in traffic. To alert motorist of the Equipment's presence, use all equipped warning signals to alert motorist and pedestrians of the equipment's presence and relatively slow speed. Serious injury or death and property damage may occur if a vehicle collides with this Equipment. (SNPS-3)

⚠WARNING Before starting a snow plowing operation, make sure all the warning signal lights are connected, visible and working. Routinely inspect the equipment's headlights, brake lights, backup lights, and turn signal lights for operational condition. Immediately repair non-functioning lighting. Always follow all local traffic regulations while operating the Snow Plow. (SNPS-4)

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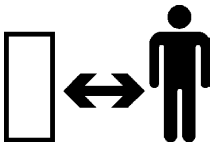
⚠WARNING Always turn on all safety lights and flashers when you operate the Snow Plow. (SNPS-5)

⚠ DANGER Be particularly careful in transport. The Implement has raised and moved the center of gravity to the front of the Power Unit increasing the possibility of overturn and tipping forward. Turn curves or go up slopes only at low speed and using a gradual turning angle. Go up slopes with the Implement located uphill. Slow down on rough or uneven surfaces. (SPU-2)

CONNECTING OR DISCONNECTING IMPLEMENT SAFETY INSTRUCTIONS AND PRACTICES

⚠WARNING Do not stand or allow bystander or coworkers between the attachment and the truck or power unit while installing or disconnecting the attachment. Keep hands and body clear of the attachment and the attachment mounts. Serious injury or death can result from a person being crushed between the attachment and truck or power unit. (SNPC-01)



⚠WARNING Reset the tripped snow plow edge by raising the snow plow off the ground. DO NOT attempt to reset the trip edge by hand. The trip edge is spring loaded and sudden and unexpected movement can occur resulting in serious injuries. Keep and hands and feet away from the trip edge. If the trip edge does not reset, stop plowing and have the snow plow repaired before resuming snow plowing. (SNPO-12)

⚠WARNING Make sure the implement is properly attached to the Power Unit and the retaining pins securely lock the Implement into position. Improper mounting of the Implement onto the Power Unit can result in the Implement falling causing serious injury. (SNPC-02)

⚠WARNING The operator of the equipment must be trained in the operation and safe use of this machine. The operator must read and completely understand the operator's manuals of the Snow Plow, Truck or Power unit manufacturers. New operators should be trained in an open area clear of obstructions before operating on public roadways. If operation of the entire Snow Plow unit (Truck or Power unit) is not completely understood, consult your authorized sales representative for a detailed explanation. Never allow an untrained or unqualified driver to operate the Snow Plow. (SNPD-1)

⚠ CAUTION The Snow Plow driver must meet the requirements and possess a Motor Vehicle License as determined by the state in which the Snow Plow is operated if used on public roadways. Contact your local State Department of Public Safety office for special licensing requirements to operate the Snow Plow in your area. (SNPD-2)

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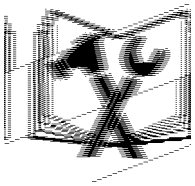
MAINTENANCE AND SERVICE SAFETY INSTRUCTIONS AND PRACTICES

⚠WARNING Perform service, repairs and lubrication according to the maintenance section. Ensure the unit is properly lubricated as specified in the lubrication schedule and all bolts and nuts are properly torqued. Failure to properly service, repair and maintain this Implement in good operating condition could cause component failure and possible serious injury or even death. (SG-35)

⚠WARNING Periodically inspect all moving parts for wear and replace when necessary with authorized service parts. Look for loose fasteners, worn or broken parts, and leaky or loose fittings. Make sure all pins are properly secured. Serious injury may occur from not maintaining this equipment in good working order. (SNPM-01)



⚠WARNING Inspect the entire Snow Plow before each use. Accidents may occur or damage to the equipment may result if the Snow Plow is not maintained in good mechanical working order.

- Check for loose bolts, worn or broken parts, pinched hydraulic hoses, and leaky or loose fittings.
- Make sure all pins are secure and safety pin equipped.
- Make sure replacement parts are the correct size and properly installed.
- Make sure all fluid levels are full and replenish as necessary.
- Make sure fuel, oil, and coolant caps are replaced and tightened.
- Check tire condition for tread wear and tire pressure at the rated PSI.
- Make sure that all safety shields and guards are attached and in good condition.
- Make sure all scheduled maintenance is up to date. (SNPM-02)

⚠WARNING Do not modify or alter this Snow Plow. Do not permit anyone to modify or alter this equipment, any of its components or any Snow Plow function. Modification can result in equipment failure and cause serious injuries to the operator, coworkers, or bystanders. (SNPM-03)

⚠WARNING Use extreme care when climbing onto the equipment to perform repairs, maintenance, and cleaning. Use proper stands and ladders to access areas that cannot be reached from ground level. Slipping and falling off the equipment can cause serious injury or death. (SNPM-04)

⚠WARNING Never attempt to repair, lubricate, adjust, clean, remove obstructions or perform any other type of service to any component while the Snow Plow is in motion or while the engine is running. Completely shut down the engine and wait for all motion to come to a complete stop before servicing the Snow Plow. (SNPM-05)

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⚠ DANGER Never leave the Snow Plow unattended while the plow is in the raised position. Accidental operation of the lifting lever or a hydraulic failure may cause a sudden drop of the unit which could result in injury or death by crushing. If the plow must be raised for inspection or service securely block up and support the Plow to prevent it falling. (SNPM-06)

⚠ DANGER Never crawl under the Snow Plow or any raised component unless it is properly blocked up and support to prevent it from falling. Accidental operation of a lifting lever or hydraulic failure may cause a sudden drop of the unit with injury or death by crushing. (SNPM-07)

⚠ WARNING Use proper protective equipment including gloves, safety eye wear, arm protection when handling plow blades and components during replacement, adjustment, and maintenance. Plow edges and components can become sharp and have burrs that could inflict puncture and cuts to the hands, arms, and/or eyes if proper protective equipment is not worn. (SNPM-08)

⚠ WARNING Replace bent, cracked, or broken plow blade with a new blade. Never attempt to straighten or weld on plow blades because this will likely crack or otherwise damage the blade with subsequent failure and possible serious injury from broken blade being ejected from plow. (SNPM-10)

⚠ DANGER Escaping pressurized hydraulic oil generated by hydraulic pumps has the potential to inflict serious injury and possible death. Never attempt to repair a pump or hose or tighten a connection while the system is pressurized. Always shut down the engine and relieve hydraulic oil pressure before performing any repairs to the hydraulic system. (SNPM-11)

⚠ WARNING Hydraulic pressure must be relieved from the hydraulic circuit prior to doing any maintenance or repair work and when the Snow Plow is parked at the end of the day. Place the Snow Plow(s) on the ground or securely blocked up. Turn off the Truck engine then engage the hydraulic remote cylinders several times to relieve hydraulic pressure prior to performing any maintenance or repair work. (SNPM-12)

⚠ WARNING Never remove debris from or unclog jams in the plow or lifting components until the engine have been completely shutdown and all components have come to a complete stop and are lowered to ground level and hydraulic pressure relieved. Always wear PPE when removing collected material and debris from the equipment. Serious injury or death may occur if any of these precautions are not followed when removing plugged or entangled debris. (SNPM-15)

⚠ WARNING Engine Exhaust, some of its constituents, and certain vehicle components contain or emit chemicals known to the state of California to cause cancer and birth defects or other reproductive harm. (SNPM-20)

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SAFETY

DANGER Do not operate this equipment with hydraulic oil or fuel leaking. Oil and fuel are expensive and their presence could present a hazard. Do not check for leaks with your hand! High-pressure oil streams from breaks in the line could penetrate the skin and cause tissue damage including gangrene. To check for a hose leak, SHUT the ENGINE OFF and remove all hydraulic pressure. Wear oil impenetrable gloves, safety glasses and use Cardboard to check for evidence of oil leaks. If you suspect a leak, REMOVE the HOSE and have it tested at a Dealer. If oil does penetrate the skin, have the injury treated immediately by a physician knowledgeable and skilled in this procedure. (SNPM-21)

WARNING Always read carefully and fully comply with the manufacturers instructions when handling fuels, oils, solvents, cleansers, and any other chemical agent. (SNPM-22)

WARNING Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the state of California to cause cancer and birth defects or other reproductive harm. Wash Hands after handling. (SNPM-23)

WARNING Avoid contact with hot surfaces on the bottom of the skid shoes or plow cutting edges. Use gloves and eye protection when servicing hot components. Contact with a hot surface can cause serious injury from burns or scalding. (SNPM-24)

WARNING Remove the negative battery cable from the battery before performing any maintenance on the electrical system to prevent an accidental circuit shorting and sparks. Sparks can result in wiring damaged, fire or personal injury. (SNPM-25)

WARNING DO NOT allow any person under a folded wing unless wing is securely supported or locked up with the safety chain. Never work under a lifted component unless the component is securely supported or blocked up. Keep bystanders clear of area when lowering wings. Sudden or unexpected dropping of wing could result in serious injury. (SNPM-26)

WARNING Before conducting maintenance on the Snow Plow stop the truck or Power Unit, place the transmission in the park position and set the parking brake. Turn the engine off and remove the key to prevent inadvertent or accidental starting of the engine. Unexpected engine start up or vehicle movement can result in serious bodily injuries or death. (SNPM-27)

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TRANSPORTING SAFETY INSTRUCTIONS AND PRACTICES

⚠WARNING Secure the wing for transport when not plowing. Secure wing in transport position using wing transport safety chain. Sudden or unexpected dropping of wing could result in serious injury. (SNPO-35)

⚠WARNING Transport the Truck, Power Unit, and Snow Plow only at safe speeds. Serious accidents and injuries can result from driving this equipment at unsafe speeds. Become familiar with the driving characteristics of the equipment and how it handles before operating or transporting on streets and highways. Make sure the Truck's or Power Unit's steering, brakes, and wheels are in good condition and operate properly)

Before transporting the Equipment determine the safe transport speeds for you and the machine.
Make sure you abide by the following rules:

- Test the Truck or power unit and Snow Plow at a slow speed and increase the speed slowly. Apply the brakes smoothly to determine the stopping characteristics of the Truck equipped with the Snow Plow. As you increase the speed of the Truck, the stopping distance increases. Determine the maximum safe transport speed for you and the equipment. When driving down a hill or on wet or icy roads, the braking distance increases: use extreme care and reduce your speed. Do not operate the equipment with weak or faulty brakes.
- Obey all traffic laws and regulations. Never exceed the posted speed limit.
- The Snow Plow has moved the center of gravity of the equipment forward. Use extreme caution when transporting at highway speeds. Slow down for sharp corners or on slopes to avoid loss of steering control.
- Only transport the equipment at the speeds determined as safe and which allow for proper control of the machine while driving and stopping during an emergency.
- When operating in traffic, use the Truck's or Power Units directional indicator or signal lights to indicate your movement. Always use the flashing warning lights and other equipped warning features to alert motorist of your presence and slow moving speed when operating in traffic. **Be Aware of Traffic Around You and Watch Out for the Other Guy.** (SNPO-09)

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Federal Laws and Regulations

This section is intended to explain in broad terms the concept and effect of federal laws and regulations concerning employer and employee equipment operators. This section is not intended as a legal interpretation of the law and should not be considered as such.

Employer-Employee Operator Regulations

U.S. Public Law 91-596 (The Williams-Steiger Occupational and Health Act of 1970) OSHA

This Act Seeks:

"...to assure so far as possible every working man and woman in the nation safe and healthful working conditions and to preserve our human resources..."

DUTIES

Sec. 5 (a) Each employer-

(1) shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees;

(2) shall comply with occupational safety and health standards promulgated under this Act.

(b) Each employee shall comply with occupational safety and health standards and all rules, regulations and orders issued pursuant to this Act which are applicable to his own actions and conduct.

OSHA Regulations

OSHA regulations state in part: "At the time of initial assignment and at least annually thereafter, the employer shall instruct every employee in the safe operation and servicing of all equipment with which the employee is, or will be involved."

Employer Responsibilities:

To ensure employee safety during plow and truck or other power unit operation, it is the employer's responsibility to:

1. Train the employee in the proper and safe operation of the plow and truck or other power unit.
2. Require that the employee read and fully understand the plow and truck or other power unit Operator's manual.
3. Permit only qualified and properly trained employees to operate the plow and truck or other power unit.
4. Maintain the plow and truck or other power unit in a safe operational condition and maintain all shields and guards on the equipment.
5. Ensure the truck or other power unit is equipped with a functional ROPS and seat belt and require that the employee operator securely fasten the safety belt and operate with the ROPS in the raised position at all times.
6. Forbid the employee operator to carry additional riders on the Tractor or Implement.
7. Provide the required tools to maintain the plow and truck or other power unit in a good safe working condition and provide the necessary support devices to secure the equipment safely while performing repairs and service.
8. Require that the employee operator stop operating equipment if bystanders or passersby come within 25 feet.

Child Labor Under 16 Years of Age

Some regulations specify that no one under the age of 16 may operate power machinery. It is your responsibility to know what these regulations are in your own area or situation. (Refer to U.S. Dept. of Labor, Employment Standard Administration, Wage & Home Division, Child Labor Bulletin #102.)

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All Hydraulic Wings for Graders

Use the following decals from sheet 7332006-010.

Henke Part No.	Qty.	Description
7331003	1	Use genuine Henke replacement parts
7331004	1	Secure body with blocks
7331005	1	Stop Engine Stay clear of moving parts
7331007	1	Read and understand operator's manual If you cannot read English get assistance
7331008	1	Chain wing in transport position
7331012	1	Raise plow before backing

(NOTE: Some decals on sheet 7332006-010 are not needed on this product. Discard decals not needed.)

Other Attachments and Decals

7330012	1	Serial Number Tag
7330023	4	Tack - Serial Tag
7300047	1	Product Manual Canister
7300048	1	Can Plug
7020391	3	Stud, 1/4-20 X 5/8 Non-Flange
7040002	3	Flat Washer, 1/4 USS
7030044	3	Nylock Nut, 1/4-20
7330014	1	Henke Logo Decal - 2000
7331006	2	Do not use hands to check for oil leaks High Pressure oil leak-injection
7331010	3	Keep clear, Pinch Point

Instructions:

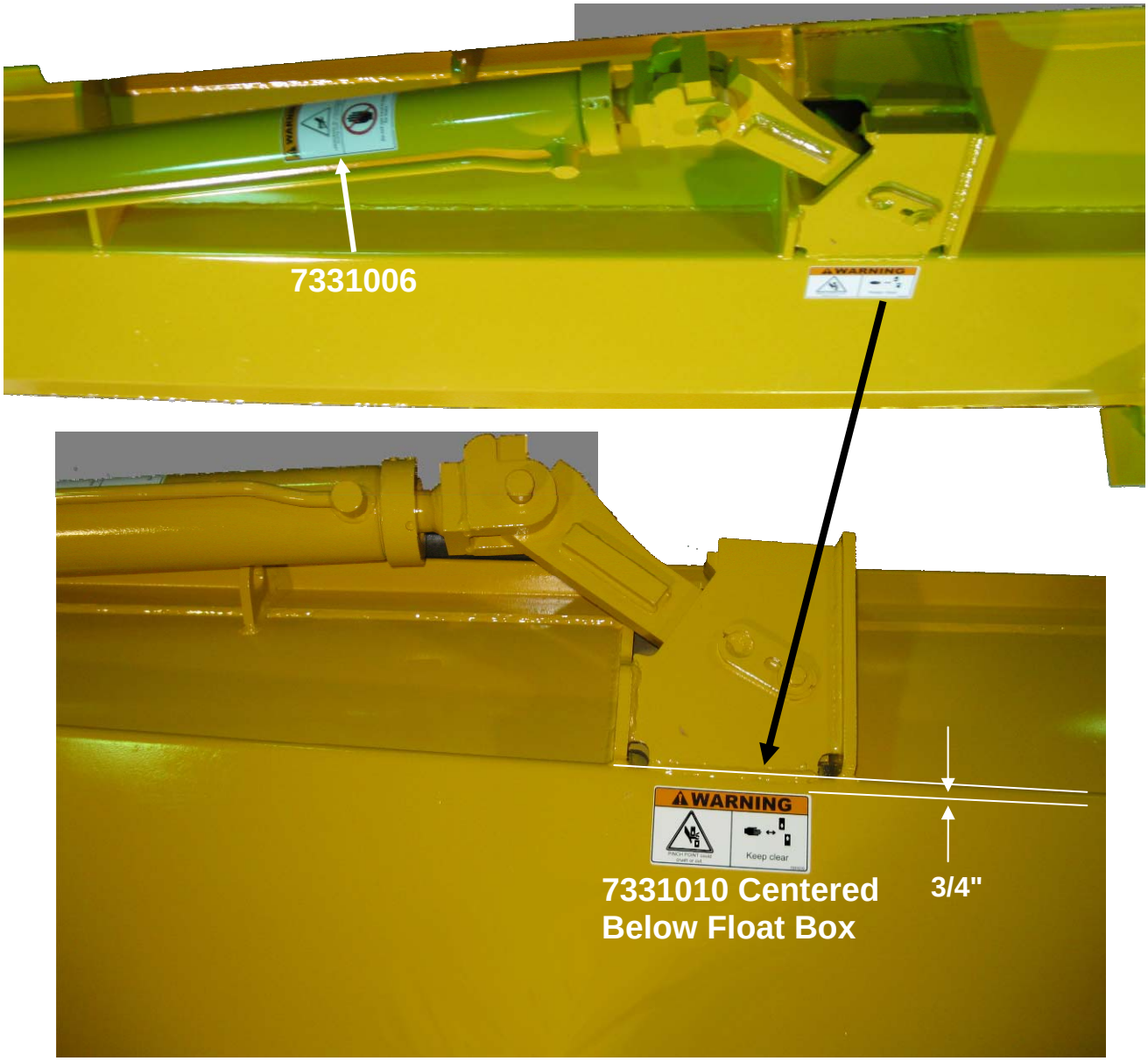
Follow these instructions to position the above items to your Henke product for safety and professional appearance. Apply on clean surfaces only. They should be properly applied and kept in good condition. If a decal is worn out, torn, or otherwise defaced, call us for an immediate replacement at 1-913-682-9000, or 1-888-682-9010.

DECALS

1. Position 7331008, 7331007, 7331005, 7331004, 7331003, 7331012 at the TOP Right of the Wing Moldboard as shown.
2. Position one of 7331010 above Push Arm Knuckle on Wing as shown.

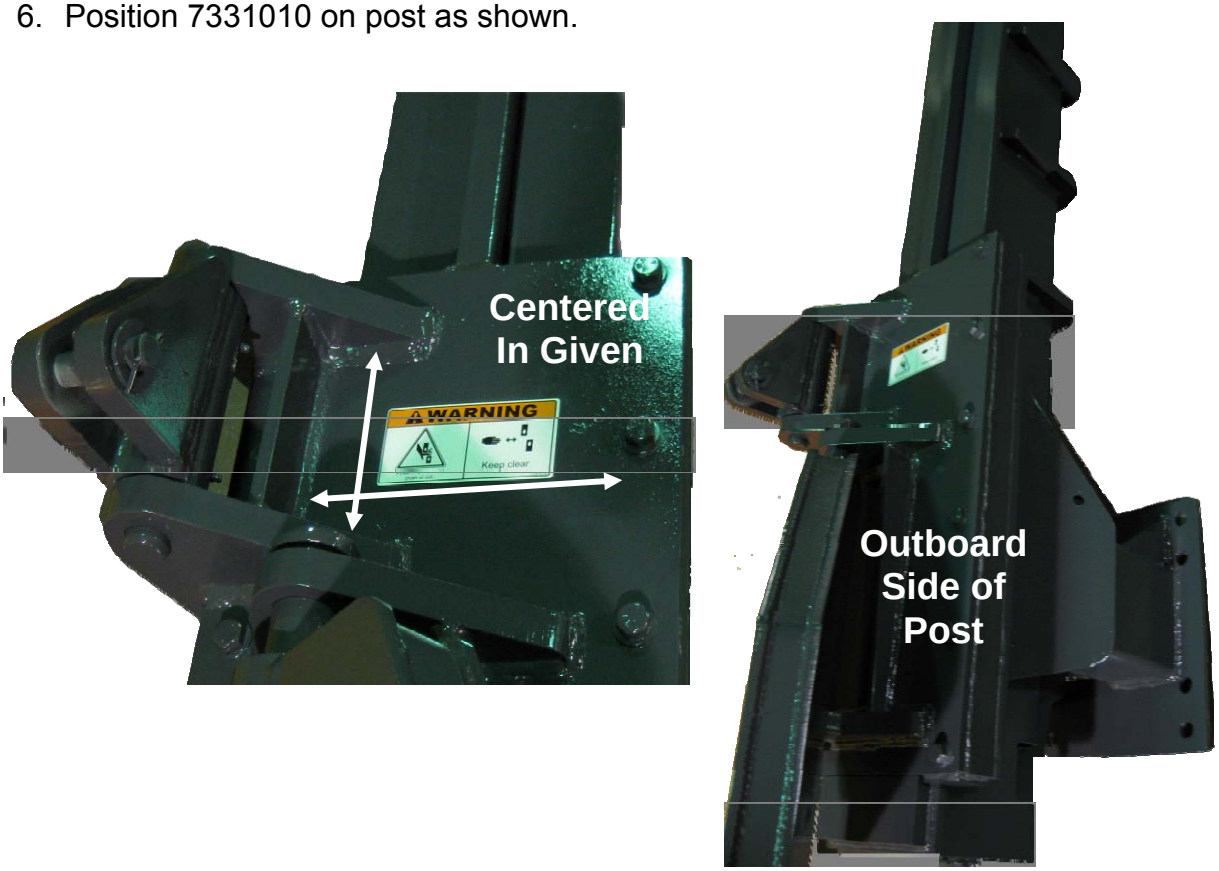
3. Position 7300047 Product Manual Canister as shown.

4. Position 7331010 below float box and 7331006 on Hydraulic Cylinder as shown.

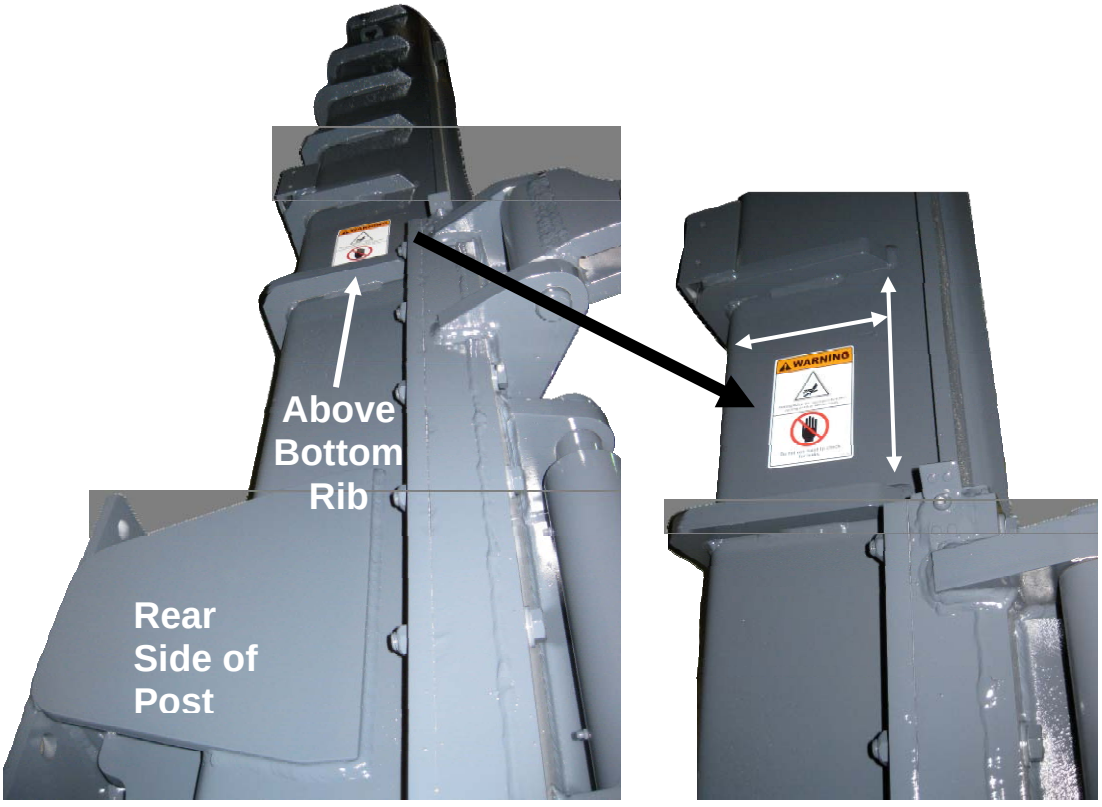


5. Position 7331005 on Push Arm as shown.

6. Position 7331010 on post as shown.



7. Position 7331006 decal on Post as shown.



In Season Maintenance

Snow removal equipment must be cared for and maintained regularly. Daily or pre-route inspection and maintenance are necessary. Failure to do so may affect efficiency and safety.

A visual inspection must be carried out after every 8 hours of operation. Look for damaged components, bends, cracked welds or hydraulic leaks. **REPAIR IMMEDIATELY!** It is recommended to re-torque all bolts after the first 8 hours of use and to regularly check for loosened or missing fasteners. Replace any damaged or missing fasteners immediately.

Because of the environment in which snow equipment is expected to operate, hydraulic lines, fasteners, wearable or replaceable items and warning decals may become damaged by snow, ice and road debris. These items must be inspected daily and replaced if necessary to avoid equipment damage or personal injury.

Lubrication of moving parts is of the utmost importance. Exposure to snow, ice, salt and road debris will wash away lubrication quickly and it may be necessary to inspect and reapply lubrication more than once a day.

End of Season Maintenance

GROUND ENGAGING COMPONENTS

- **CUTTING EDGES & GUARDS**
  Replace any broken cutting edges, unevenly or excessively worn cutting edges, and broken or worn wear guards.

- **RUNNING GEAR**
  Replace broken, worn, or missing running gear shoes, and any damaged adjuster leg components. Grease internal threads and sliding members (it's best to disassemble and grease directly; zerks aren't as effective at greasing these areas).

- **HARDWARE**
  Replace missing or broken bolts. Proper torque is important! Use grade 8 plow bolts for steel cutting edges.

HYDRAULICS

- **HOSES**
  Plug or cap any QC fittings or any open hose ends. Inspect hoses for any leaks or potential leaks. Secure hoses with hose clamps.

- **CYLINDERS**
  Check for leaks, and any chrome rod dents or scratches. Apply a light coat of oil or grease on exposed rod surfaces.

FRAME AND MOLDBOARD

- **JOINTS**
  Check pins, bushings, and pivot bolts for wear. Make sure all keepers are in place. Make sure shear bolts and pins are same as original equipment (usually grade 2). Some drivers don't like replacing shear pins and will install grade 8 replacements to avoid replacing during a storm. These items are ***designed to shear*** to protect the driver and the equipment. **CHECK WELDMENTS FOR CRACKS.**

REPLACE WORN OR BROKEN PARTS FOUND BY ABOVE INSPECTIONS.

The installation hardware provided for the A ll Hydraulic Wing is listed below. If any hardware is missing please contact H enke Manufacturing Corporation. All installation hardware is yellow zinc plated for long-term corrosion resistance.

TABLE 1 – Wing Installation Loose Hardware

BAG A - PLATE ATTACHMENT HARDWARE (Henke # 249-0746)

Part No.	Description	Qty.
7020299	Hex Capscrew, M24 x3 x75 GR.10.9	8
7040013	Flat Washer, Hardened, 1.0 SAE	8

BAG B - PIPE BRACE HARDWARE (Henke # 249-0751)

Part No.	Description	Qty.
7020080	Hex Capscrew, 3/4-10 x 3.0 GR. 8	3
7030013	Nut, 3/4-10 GR. 8	3
7040021	Lock Washer, 3/4	3
7020262	Hex Capscrew, M20 x 2.5 x 50 GR. 10.9	3
7040060	Lock Washer, 20MM	3

ITEMS PACKED SEPARATELY

Part No.	Description	Qty.
2400-1410	Post Attach Plate	1
2400-0502	Pipe Brace, 58" Length	2
2400-0711	Triangular Brace Mount	1
7070042	Ball Joint	4

BAG D – ATTACHING STRUCTURE TO PLATE HARDWARE (Henke # 249-0720)

Part No.	Description	Qty.
7020082	Hex Capscrew, 3/4-10 x 3.5 GR. 8	12
7040007	Flat Washer, 3/4 Hardened, SAE	24
7030013	Nut, 3/4-10 GR. 8	12

BAG BU - FRONT POST TO ATTACHING STRUCTURE HARDWARE (Henke # 249-0738)

Part No.	Description	Qty.
7020233	Hex Capscrew, 1-8 x 3 GR.8	8
7040013	Flat Washer, 1.0 Hardened, SAE	16
7030016	Nut, 1-8 GR.8	8

ALL HYDRAULIC WING SAFETY CHAIN ASSEMBLY (Henke # 249-0196)

Part No.	Description	Qty.
7060001	Shackle 7/16 2T Rod Pin	1
7060016	Rigging Hook w/ Latch 1.57	1
7060021	Chain 3.8 GR. 70	56”
7060037	Double Clevis 3/8 2.7T	1

TABLE 1 (CONTINUED) – Optional Rear Attachment Hardware

ELEVATING REAR or MANUALLY ELEVATING REAR
ITEMS PACKED SEPARATELY

Part No.	Description	Qty.
2100-0532	Pipe Brace, 36” Length	1
7070042	2” Ball Joint, .78 Hole	2
2400-1730	Pipe Brace Attach Plate, JD G T4 ER	1
4300-0251	Bar	1

BAG C –ELEVATING REAR or MANUALLY ELEVATING REAR HDW (Henke # 249-0826)

Part No.	Description	Qty.
7020255	Hex Capscrew, 3/4-10 x 2.5 GR. 8	1
7040021	Lock Washer, 3/4 -10 GR.8	2
7030013	NUT, 3/4 -10 GR.8	2
7020266	Hex Capscrew, M20 x 2.5 x 70 GR.10.9	8
7020262	Hex Capscrew, M20 x 2.5 x 50 GR.10.9	1
7040060	Lock Washer, 20 MM	1
7040007	Flat Washer, 3/4 Hardened, SAE	8
7020078	Hex Capscrew, ¾-10 x 2.75 GR.8	1

BAG E – FIXED REAR or REAR RIPPER HARDWARE (Henke # 249-0752)

Part No.	Description	Qty.
7020266	Hex Capscrew, M20 x 2.5 x 70 GR.10.9	7
7020262	Hex Capscrew, M20 x 2.5 x 50 GR.10.9	1
7040007	Flat Washer, 3/4 Hardened, SAE	8

ITEMS AND KITS PACKED SEPARATELY

Part No.	Description	Qty.
2400-1427	Bulkhead Plate	1
7082051	Hydraulic Kit for Bulkhead Plate to Henke 66” Benching Wing (Figs.19-25 and Table 8)	1
7082107	Hydraulic Kit for Bulkhead Plate to Henke 42” Benching Wing (Figs.19-25 and Table 9)	1
7082003	4-105” hoses (Table 10) (Open valve sections on non-wing side)	1
7082004	4-50” hoses (Table 11) (Open valve sections on wing side)	1
249-0392	MUDROC Valve W/ Hardware (Figs. 22-23, & 25)	1
7082050	Optional Elevating Rear Hydraulic Kit	1

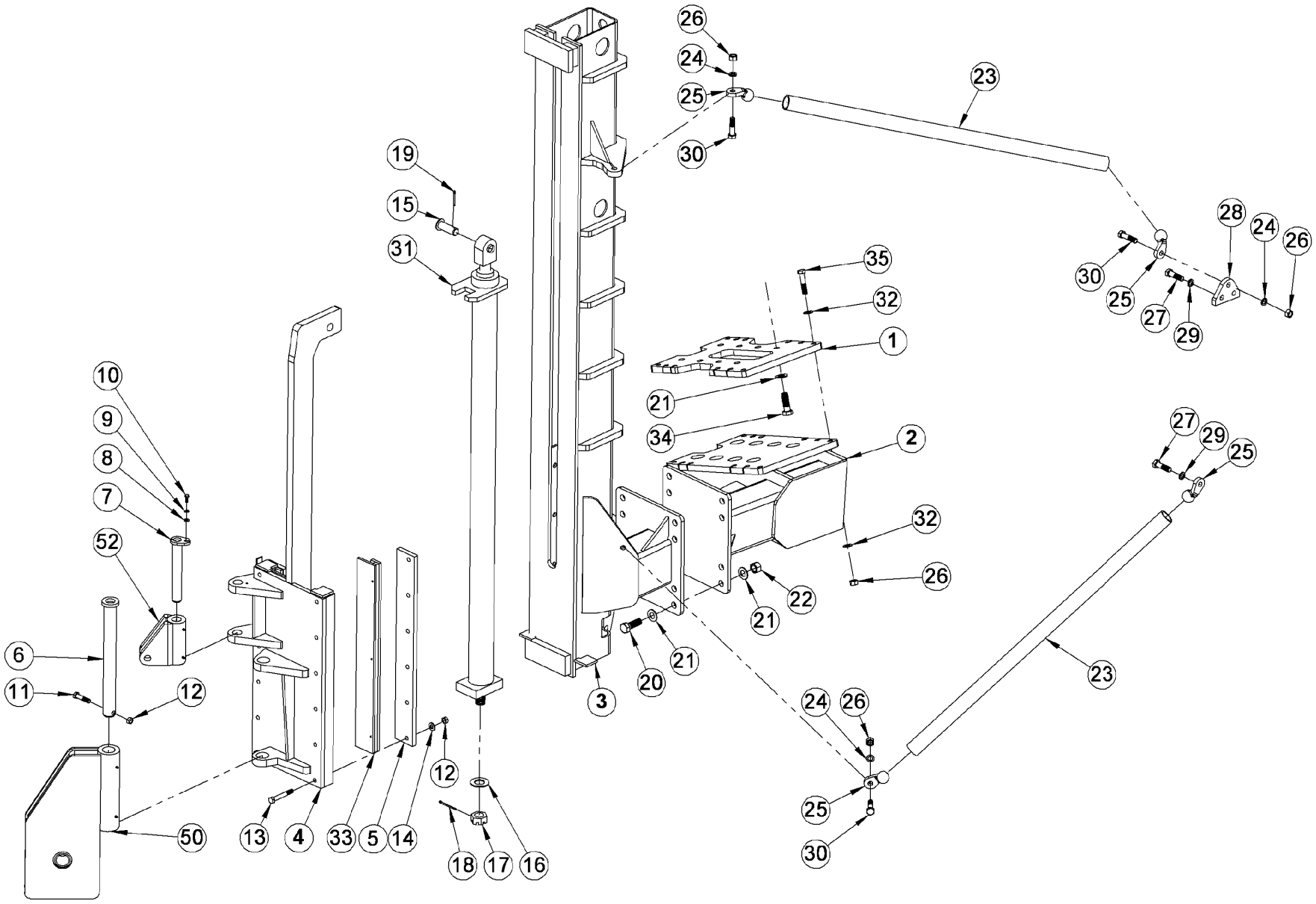


FIGURE 2 – AHW Front Post Assembly & Attachments

TABLE 2 – Front Post Assembly & Attachments, Parts List

This list is important and should be referred to when ordering replacement parts from your local dealer or Henke Manufacturing Corporation. The parts diagram for the front post assembly is shown in Figure 2.

Item No.	Qty.	Part No.	Description
1	1	2400-1410	Post Attach Plate
2	1	249-0743	Post Attach Structure
3	1	249-0735 249-0740	Post + Attach, Bolt-On, 66" Bench Post + Attach, Bolt-On, 42" Bench
4	1	249-0574 249-0708	Slide Assembly, 66" Bench Slide Assembly, 42" Bench
5	2	2400-1054	Slide Keeper (Comes with Item #4)
6	1	249-0215	Banjo Hinge Pin
7	1	249-0188	Knuckle Pin Assembly
8	1	7040004	Flat Washer, 3/8 Hardened, USS
9	1	7040018	Lockwasher, 3/8
10	1	7020029	Hex Capscrew, 3/8-16x1.0 GR. 5
11	1	7020131	Hex Capscrew, 5/8-11x2.75 GR. 8
12	13	7030084	Toplock Nut, 5/8-11 GR. C
13	12	7020128	Hex Capscrew, 5/8-11 x 4.5 GR. 5
14	12	7040006	Flat Washer, 5/8 Hardened, SAE
15	1	249-0200	Pin Assembly
16	1	7040024	Flat Washer, 1 1/2 Hardened, SAE
17	1	7030024	Nut, 1 1/2-6 Slotted
18	1	7050001	Cotter Pin, 1/4 x 3.0
19	1	7050003	Cotter Pin, 3/16 x 2.0
20	8	7020233	Hex Capscrew, 1-8x3.0 GR.8
21	24	7040013	Flat Washer, 1" Hardened SAE
22	8	7030016	Nut, 1-8 GR. 8
23	2	2400-0502	Pipe Brace, 58"
24	3	7040021	Lock Washer, 3/4 SAE
25	4	7070042	2" Ball joint, .78 Hole
26	15	7030013	Nut, 3/4-10 GR. 8
27	3	7020262	Hex Capscrew, 20MM x 2.5x50, GR. 10.9
28	1	2400-0711	Pipe Brace Mount
29	3	7040060	Lock Washer, 20 MM
30	3	7020080	Hex Capscrew, 3/4-10 x 3 GR. 8
31	1	7080809 7080811	Hydraulic Cylinder, 3.5 x 66 x 1.75 Hydraulic Cylinder, 3.5 x 42 x 1.75
32	24	7040007	Flat Washer, 3/4 Hardened, SAE
33	2	7300006	Nylatron Slide Guide
34	8	7020299	Hex Capscrew, M24x3x75 GR. 10.9
35	12	7020082	Hex Capscrew, 3/4-10x3.5 GR. 8
50	1	249-0192	Banjo Hinge Assembly
52	1	249-0185	Knuckle Assembly
53	6	7050048	Roll Pin, 1/4 X 2 (For Slide Assembly) Not Shown

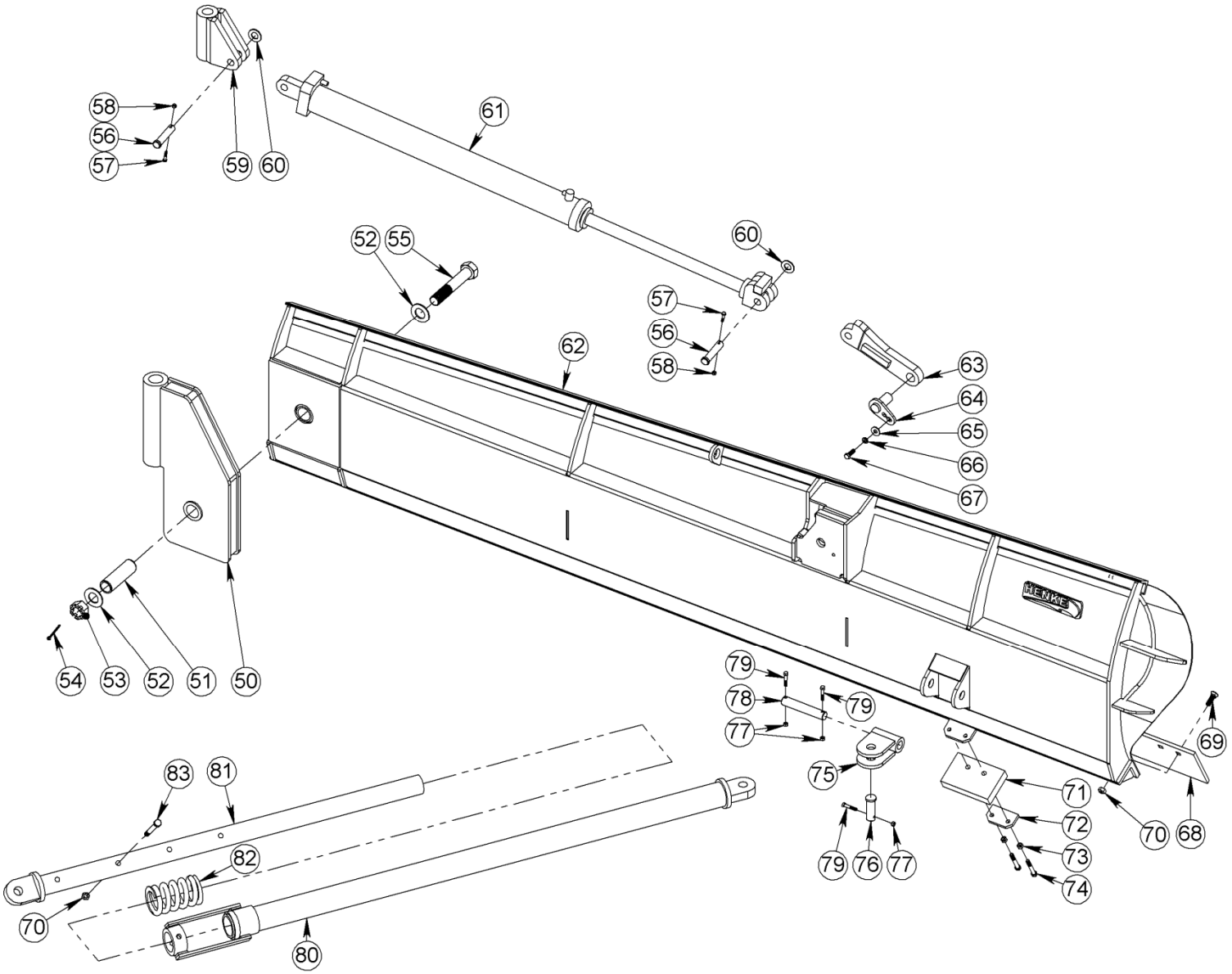


FIGURE 3 – AHW Moldboard Assembly & Attachments

TABLE 3 – AHW Moldboard Assembly & Attachments, Parts List

This list is important and should be referred to when ordering replacement parts from your local dealer or Henke Manufacturing Corporation. The parts diagram for the moldboard and push tube assemblies is shown in Figure 2.

Item No.	Qty.	Part No.	Description
50	1	249-0192	Banjo Hinge Assembly
51	1	2400-0062	Hinge Plate Bushing
52	2	7040024	Flat Washer, 1 1/2 Hardened, SAE
53	1	7030024	Slotted Nut, 1 1/2-6
54	1	7050001	Cotter Pin, 1/4 x 3
55	1	2400-0183	Moldboard Attaching Bolt
56	2	2400-1870	Clevis Pin, 1 . 4.5, Modified
57	2	7020019	Hex Capscrew, 5/16-18 X 1.5 GR. 5
58	2	7030086	Nylock Nut, 5/16-18
59	1	249-0185	Knuckle Assembly
60	1	7080808	Hydraulic Cylinder, 3.5 x 37.5 x 1.75
N/A	N/A	7080908	Seal Kit for Cylinder 7080808
61	1	249-0199	Moldboard Assembly
62	1	249-0189	Float Link Assembly
63	1	139-0918	Float Link Pin Assembly
64	1	7040005	Flat Washer, 1/2 Hardened, SAE
65	1	7040019	Lock Washer, ½
66	1	7020130	Hex Capscrew, 1/2-13 x 1.5 GR. 8
67	Varies	Varies	Cutting Edge (1/2 x 8 Standard)
68	Varies	Varies	Plow Bolt, 5/8-11 GR. 8
69	Varies	7030084	Toplock Nut, 5/8-11 GR. C
70	1	2000-0126	Bumper
71	1	2000-0125	Bumper Bracket
72	2	7030031	Toplock Nut, 1/2-13 GR. C
73	2	7020051	Hex Capscrew, 1/2-13 x 3.5 GR. 5
74	1	249-0193	Pushbeam Moldboard Joint
75	1	2400-1784	Clevis Pin, 1-1/4 x 3.5 AHW
76	3	7030006	Nylock Nut, 3/8-16
77	1	2300-0160	Pin, 1.25 x 7
78	3	7020034	Hex Capscrew, 3/8-16 x 2
79	1	249-0783	Outer Tube Assembly
80	1	249-0779	Inner Tube Assembly
81	1	7070103	Compression Spring
82	1	7020500	Hex Capscrew, 5/8-11 x 5.5

All wings are supplied with one of the following: an elevating rear (ER), a rear ripper (RR), a fixed rear (FR) attachment or a manually elevating rear (MR). The parts lists and exploded views for all four rear attachment options are given in the next four pages.

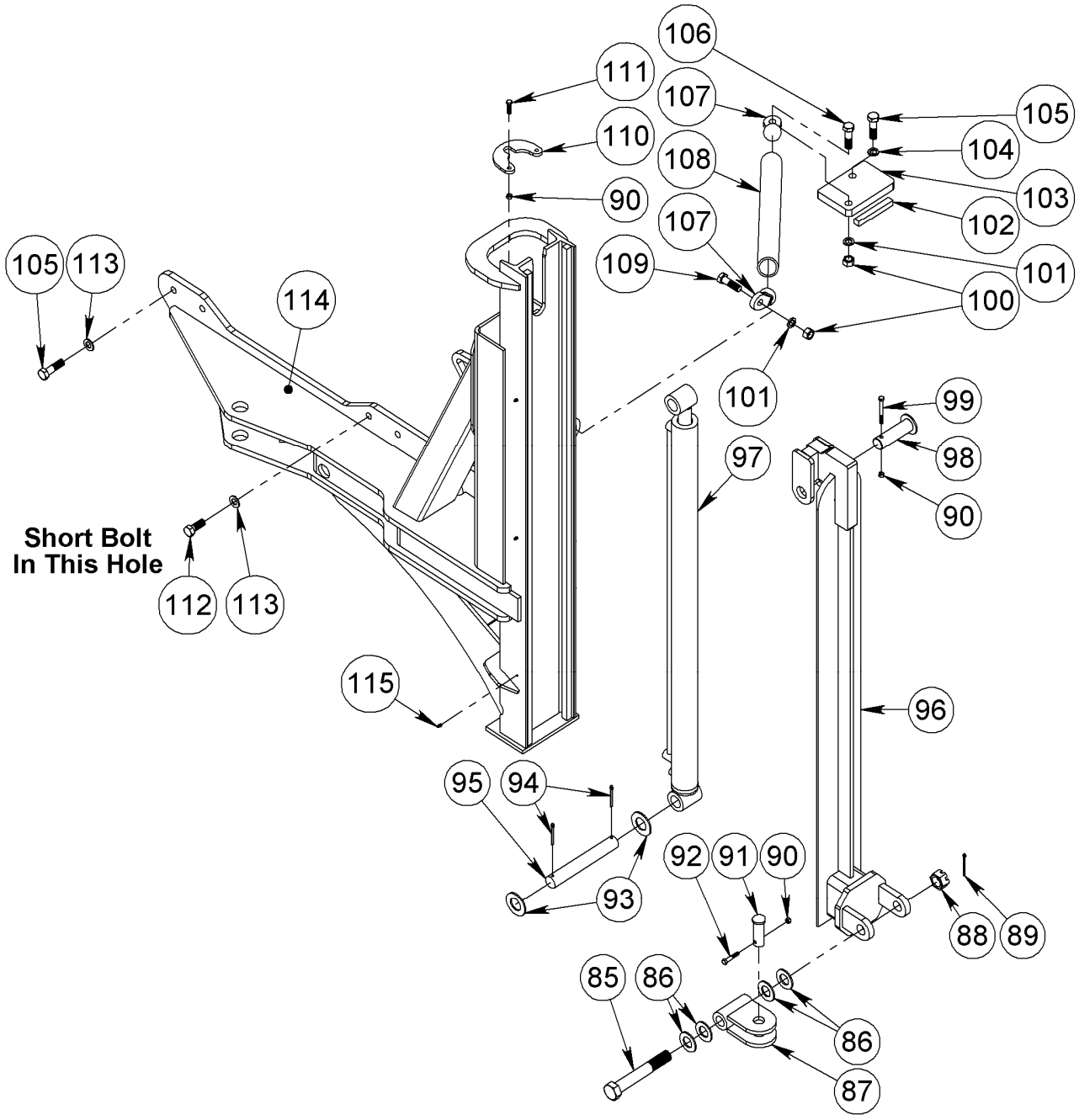


FIGURE 4 – AHW Elevating Rear Assembly (Optional)

TABLE 4 – Elevating Rear Assembly, Parts List

Item No.	Qty.	Part No.	Description
85	1	2300-0188	Knuckle Bolt
86	4	7040014	Flat Washer, 1 1/4, Hardened, SAE
87	1	249-0193	Push Beam to Moldboard Joint
88	1	7030023	Slotted Nut, 1 1/4-7 GR. 2
89	1	7050043	Cotter Pin, 3/16 x 2.5
90	4	7030006	Nylock Nut, 3/8-16 GR. 2
91	1	2400-1784	Clevis Pin, 1 1/4 x 3.5
92	1	7020034	Hex Capscrew, 3/8-16 X 2
93	2	7040024	Flat Washer, 1 1/2, Hardened, SAE
94	1	4200-0032	Hydraulic Cylinder Mounting Pin
95	2	7050099	Cotter Pin, 1/4 x 2.5
96	1	249-0655	Rear Post Slide Assembly
97	1	7080891	Hydraulic Cylindar, 2.5 X 48 X 1.5
98	1	429-0892	Pin Assembly
99	1	7020117	Hex Capscrew, 3/8-16 x 3.5 GR. 5
100	2	7030013	Nut, 3/4-10 GR. 8
101	2	7040021	Lock Washer, 3/4 SAE
102	1	4300-0251	Bar, Pipe Brace Shear Bar
103	1	2400-1730	Pipe Brace Attach Plate
104	1	7040060	Lock Washer, 20 MM
105	8	7020266	Hex Capscrew, M20 x 2.5 x 70 GR. 10.9
106	1	7020078	Hex Capscrew, 3/4-10 X 2.75 GR.8
107	2	7070042	2" Ball Joint, .78 Hole
108	1	2100-0532	Pipe Brace, Rear
109	1	7020255	Hex Capscrew, 3/4-10 x 2.50 GR.8
110	1	4200-0016	Clamp Half, Bolt Side
111	2	7020031	Hex Capscrew, 3/8-16 x 1.5 GR. 5
112	1	7020262	Hex Capscrew, M20 x 2.5 x 50 GR. 10.9
113	8	7040007	Flat Washer, 3/4 Hardened, SAE
114	1	249-0768	Elevating Rear Assembly

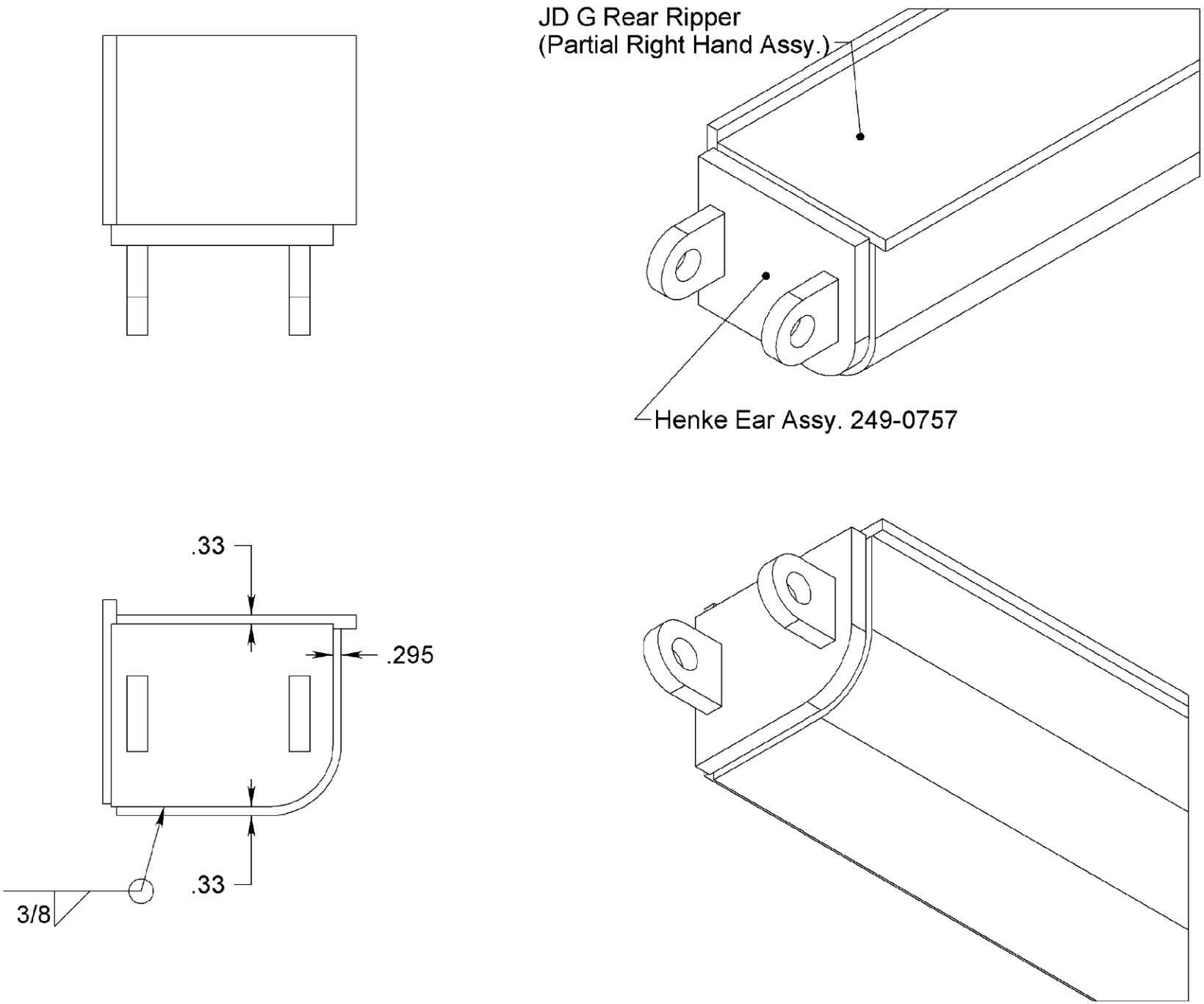


FIGURE 5 – Rear Ripper Assembly (Optional)

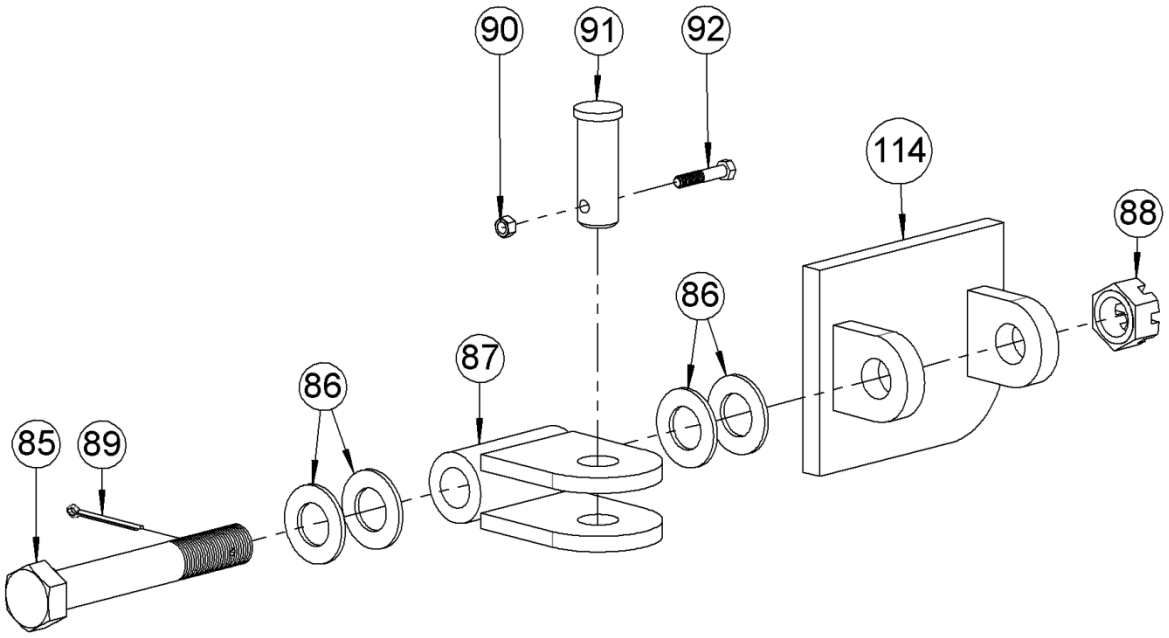


FIGURE 6 – Rear Ripper Assembly (Optional)

TABLE 5 – Rear Ripper Assembly, Parts List

Item No.	Qty.	Part No.	Description
85	1	2300-0188	Knuckle Bolt
86	4	7040014	Flat Washerm, 1 1/4 Hardened, SAE
87	1	249-0193	Pusbheam- Moldboard Joint
88	1	7030023	Slotted Nut, 1 1/4-7
89	1	7050043	Cotter Pin, 3/16 X 2.5
90	1	7030006	Nylock Nut, 3/8-16
91	1	2400-1784	Clevis Pin, 1-1/4 X 3.5
92	1	7020034	Hex Capscrew, 3/8-16 X 2
114	1	249-0757	Ear Assembly - Rear Ripper

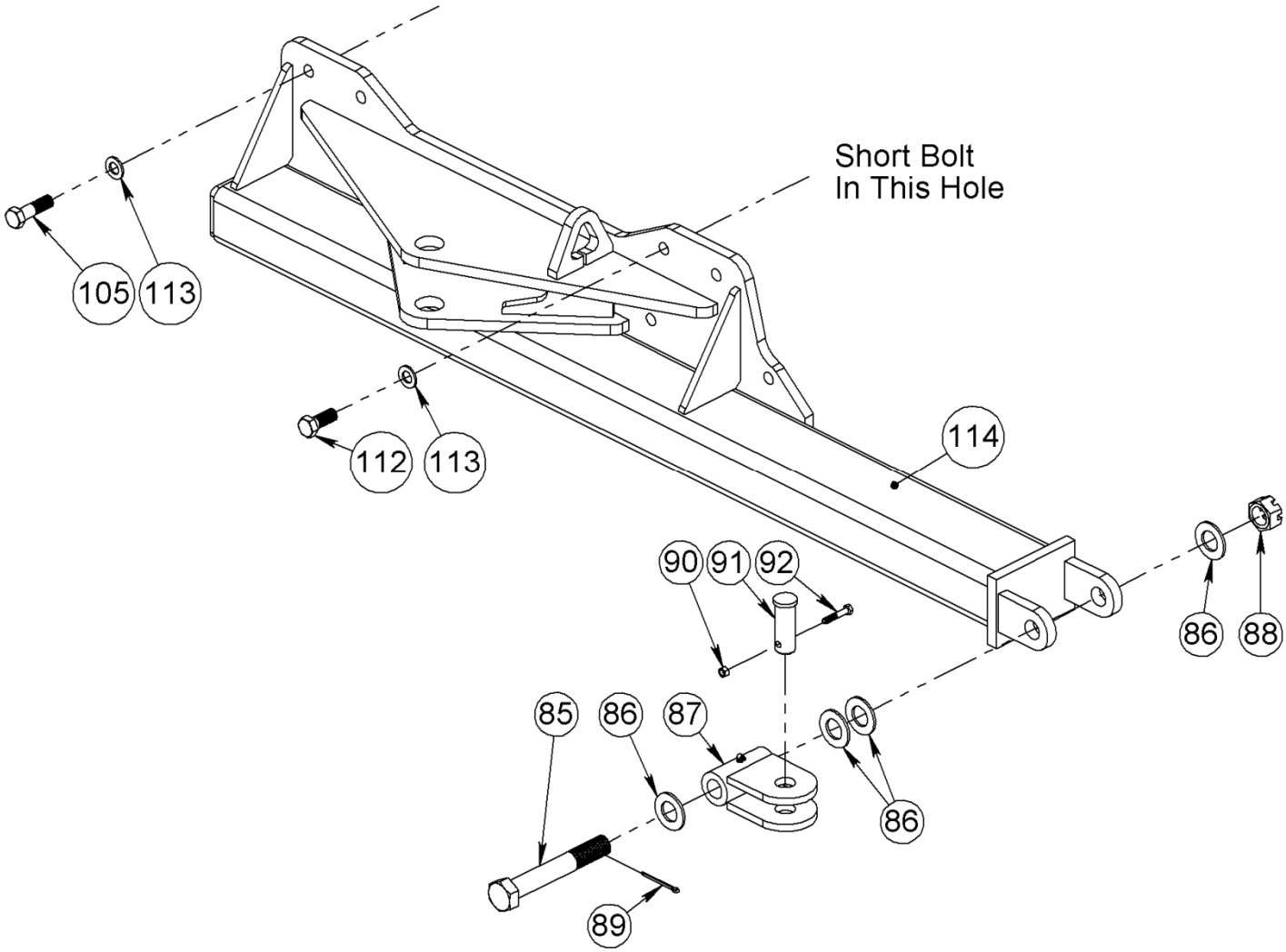


FIGURE 7 – Fixed Rear Assembly (Optional)

TABLE 6 – Fixed Rear Assembly, Parts List

Item No.	Qty.	Part No.	Description
85	1	2400-1728	Knuckle Bolt
86	4	7040014	Flat Washer, 1 1/4 Hardened, SAE
87	1	249-0193	Pushbeam-Moldboard Joint
88	1	7030023	Slotted Nut, 1 1/4-7
89	1	7050043	Cotter Pin, 3/16 x 2.5
90	1	7030006	Nylock Nut, 3/8-16
91	1	2400-1784	Clevis Pin, 1-1/4 X 3.5
92	1	7020034	Hex Capscrew, 3/8-16 X 2
105	7	7020266	Hex Capscrew, M20 x 2.5 x 70 GR. 10.9
114	1	249-0742	Fixed Rear Assembly, JD G
112	1	7020262	Hex Capscrew, M20 x 2.5 x 50 GR. 10.9
113	8	7040007	Flat Washer, 3/4 Hardened, SAE

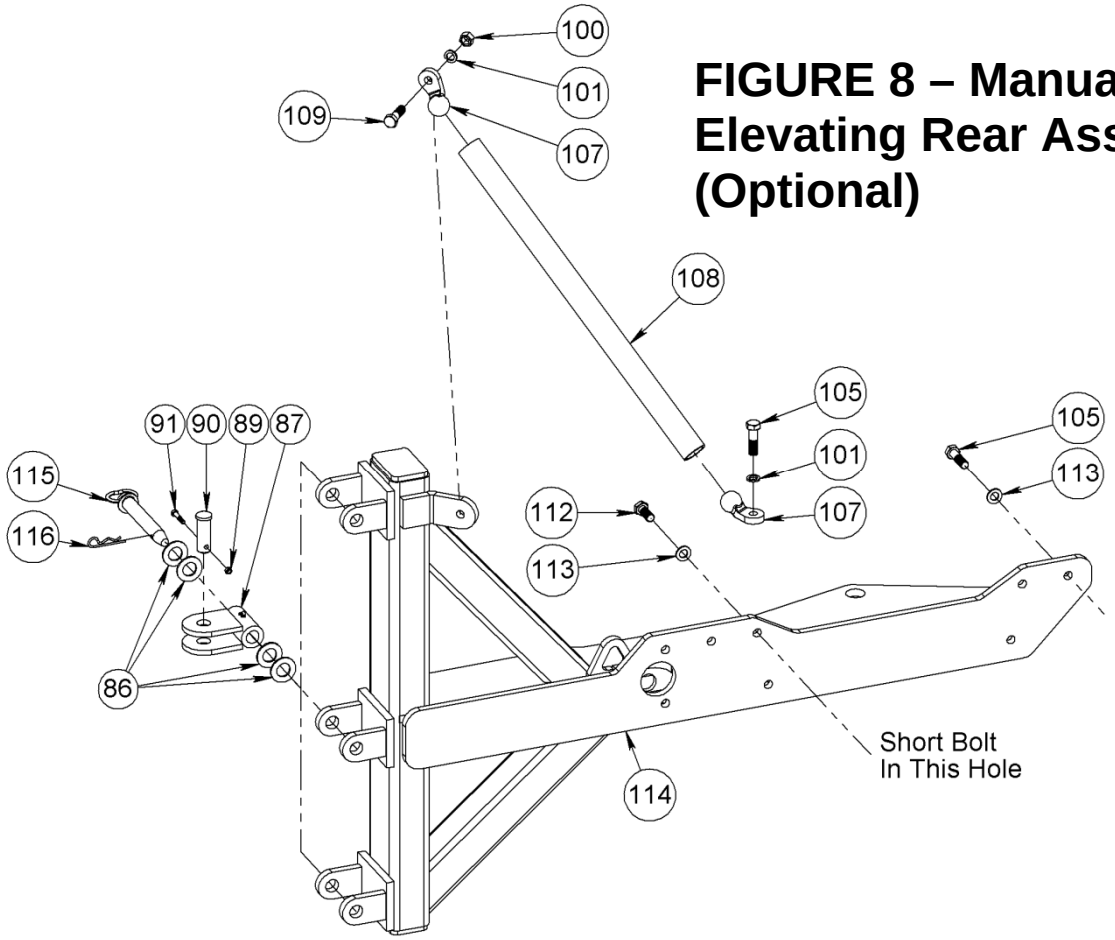


FIGURE 8 – Manually Elevating Rear Assembly (Optional)

TABLE 7 – Manually Elevating Rear Assembly, Parts List

Item No.	Qty.	Part No.	Description
86	4	7040014	Flat Washer, 3/4 Hardened, SAE
87	1	249-0193	Knuckle Assembly
89	1	7030006	Nylock Nut, 3/8-16
90	1	2400-1784	Clevis Pin, 1-14 X 3.5
91	1	7020034	Hex Capscrew, 3/8-16 X 2
100	1	7030013	Nut, 3/4-10 GR. 8
101	2	7040021	Lock Washer, 3/4 SAE
105	7	7020266	Hex Capscrew, M20 x 2.5 x 70 GR. 10.9
107	2	7070042	2" Ball Joint, .78 Hole
108	1	2100-0532	Pipe Brace, Rear
109	1	7020255	Hex Capscrew, 3/4-10 x 2.50 GR.8
112	1	7020262	Hex Capscrew, M20 x 2.5 x 50 GR. 10.9
113	8	7040007	Flat Washer, 3/4 Hardened, SAE
114	1	249-0747	Manual Elevating Rear Assembly, JD G
115	1	7050104	Hitch Pin, 1.25 x 7.0 Grip Assembly
116	1	7050081	Hair Pin #8 .177X3.75 (Included with 7050104 Assembly)

FIGURE 9 – Manual Elevating Rear and Pipe Brace Mounting

FIGURE 10 – Front Post Frame Ready Plate Mounting

FIGURE 11 – Front Post & Attaching Structure Mounting

FIGURE 12 – Pipe Braces

FIGURE 13 – Pipe Brace Installation

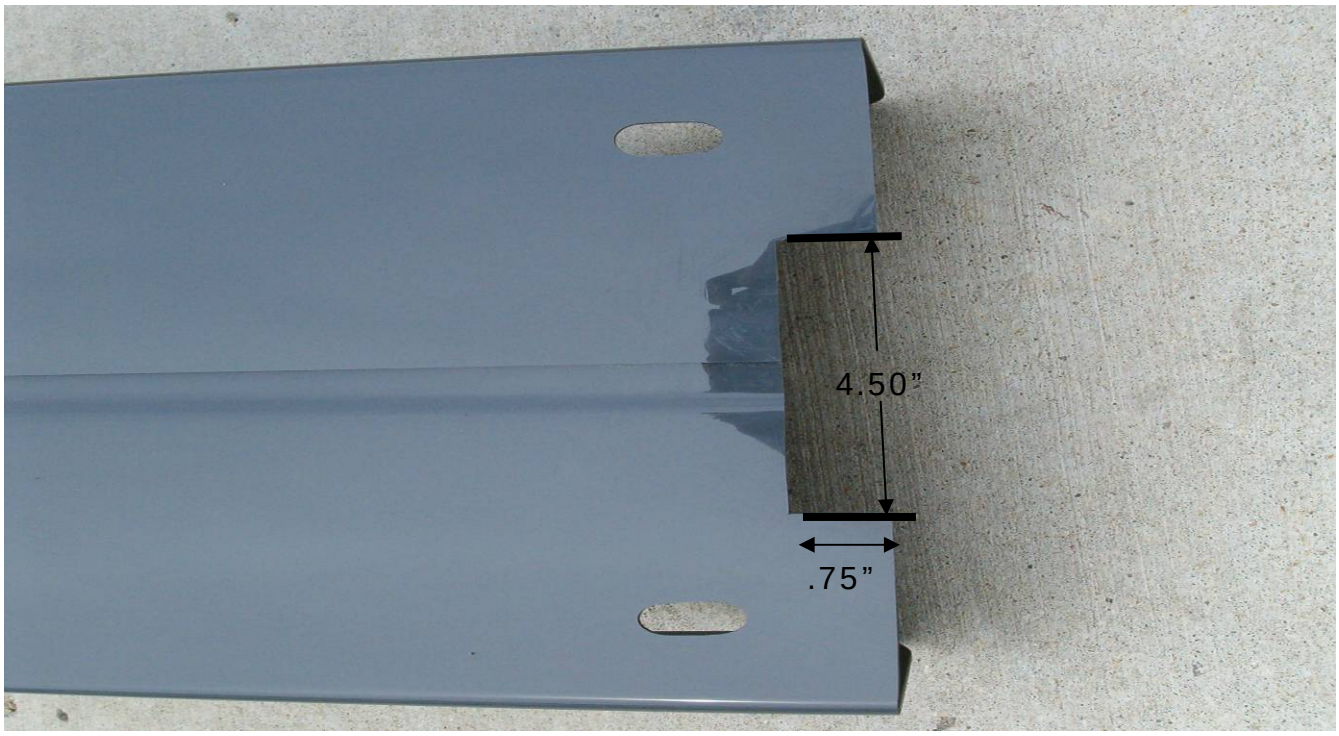


FIGURE 14 – Notching of Top Cover

Hydraulic Fittings and Hoses Running from Bulkhead Plate Out to Henke Wing (See Figs. 18-21 and Table 7)

From All Bulkhead Positions:

7090419 Bulkhead Fitting
7090543 QC Male w/7090406 Cap
7090544 QC Female w/7090405 Plug
7090290 Adapter

From Bulkhead Position1:

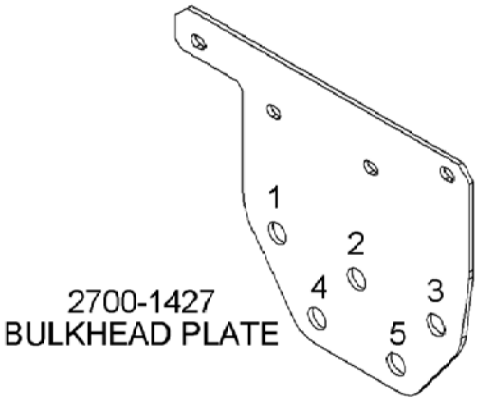
7090404 Elbow 45°
7110716 Hose 26"
7090290 Adapter
in Port "V1" on MUDROC Valve
out Port "C1" on MUDROC Valve
7090290 Adapter
7110605 Hose 98"
7090283 Elbow
To Rod End Port of Wing Lift Cylinder

From Bulkhead Position2:

7090404 Elbow 45°
7110716 Hose 26"
7090290 Adapter
in Port "V2" on MUDROC Valve
out Port "C2" on MUDROC Valve
7090290 Adapter
7110605 Hose 98"
7090283 Elbow
To Barrel End Port of Wing Lift Cylinder

From Bulkhead Position3:

7090404 Elbow 45°
7110716 Hose 26"
7090117 Elbow 90°
To Port "T" on MUDROC Valve



From Bulkhead Position4:

7110684 Hose 36"
7090014 Adapter
To Rod End (Rear) Port of Wing
Slide Cylinder

From Bulkhead Position5:

7110684 Hose 36"
7090014 Adapter
To Barrel End (Front) Port of Wing
Slide Cylinder

NOTE: All items on this page (except Bulkheat Plate) are included in Kit 7082051.

FIGURE 15 – Hydraulic Schematic, from Bulkhead Plate to Wing, 66” Bench Height

Hydraulic Fittings and Hoses Running from Bulkhead Plate Out to Henke Wing (See Figs. 18-21 and Table 7)

From All Bulkhead Positions:

7090419 Bulkhead Fitting
7090543 QC Male w/7090406 Cap
7090544 QC Female w/7090405 Plug
7090290 Adapter

From Bulkhead Position1:

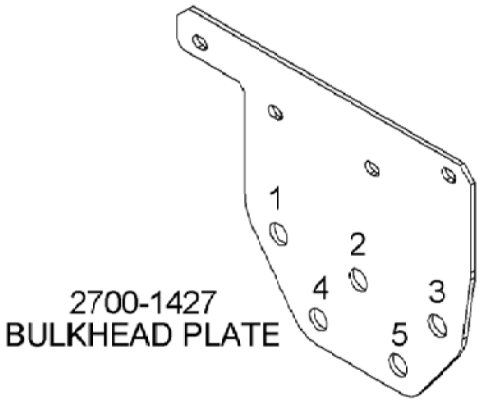
7090404 Elbow 45°
7110716 Hose 26"
7090290 Adapter
in Port "V1" on MUDROC Valve
out Port "C1" on MUDROC Valve
7090290 Adapter
7110562 Hose 78"
7090283 Elbow
To Rod End Port of Wing Lift Cylinder

From Bulkhead Position2:

7090404 Elbow 45°
7110716 Hose 26"
7090290 Adapter
in Port "V2" on MUDROC Valve
out Port "C2" on MUDROC Valve
7090290 Adapter
7110562 Hose 78"
7090283 Elbow
To Barrel End Port of Wing Lift Cylinder

From Bulkhead Position3:

7090404 Elbow 45°
7110716 Hose 26"
7090117 Elbow 90°
To Port "T" on MUDROC Valve



2700-1427
BULKHEAD PLATE

From Bulkhead Position4:

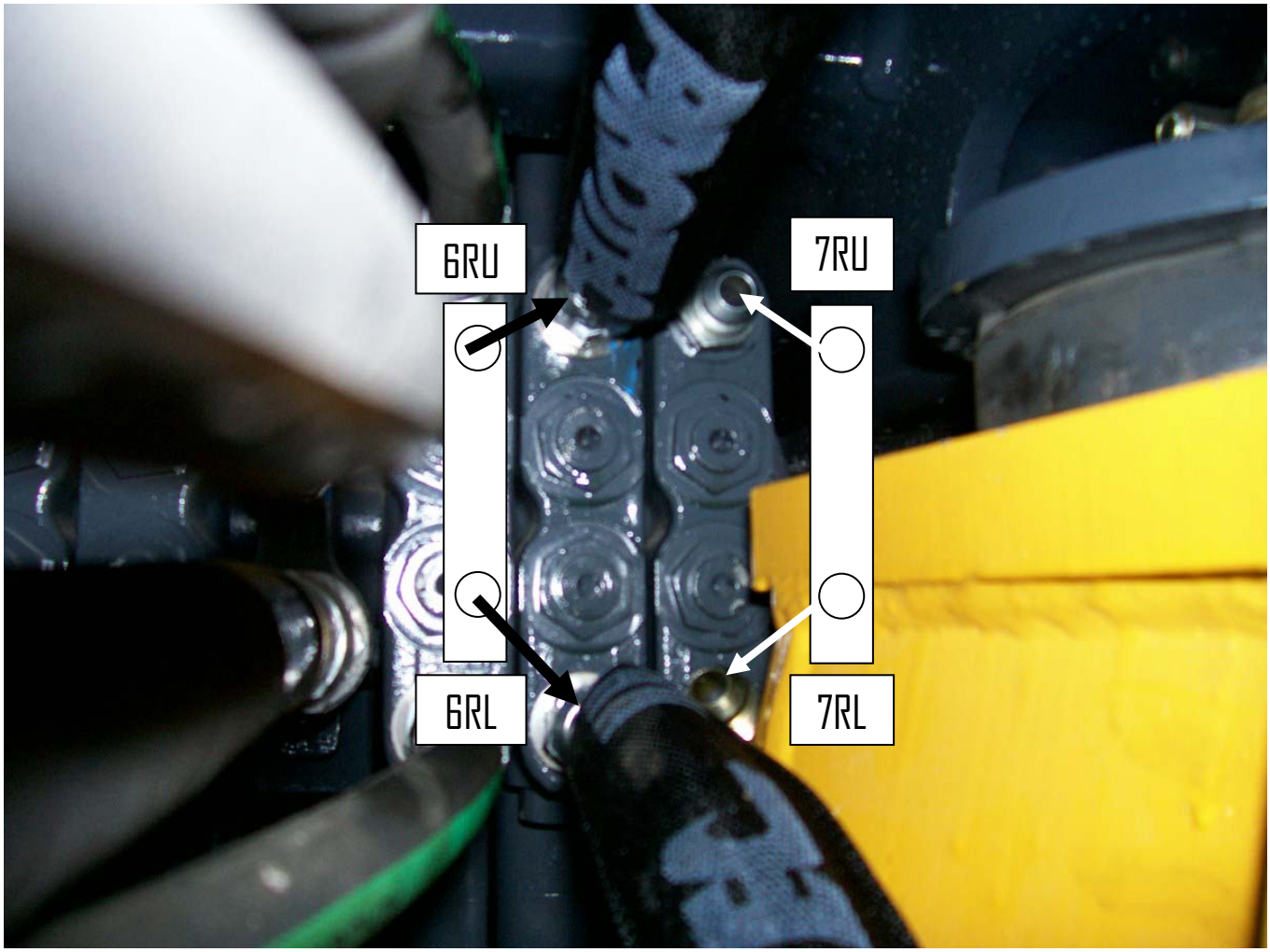
7110684 Hose 36"
7090014 Adapter
To Rod End (Rear) Port of Wing
Slide Cylinder

From Bulkhead Position5:

7110684 Hose 36"
7090014 Adapter
To Barrel End (Front) Port of Wing
Slide Cylinder

NOTE: All items on this page (except Bulkheat Plate) are included in Kit 7082107.

FIGURE 16 – Hydraulic Schematic, from Bulkhead Plate to Wing, 42" Benching Height



From JD Combination Valve "T" Port (Figure 18)
7090223 Tee
7110699 Hose 48"
7090235 Elbow
To Bulkhead Position 3

From Valve Section 6R, Upper Port (6RU):
7090290 Adapter
7110700 Hose 50"
7090404 Elbow
To Bulkhead Position 4

From Valve Section 6R, Lower Port (6RL):
7090290 Adapter
7110700 Hose 50"
7090235 Elbow
To Bulkhead Position 5

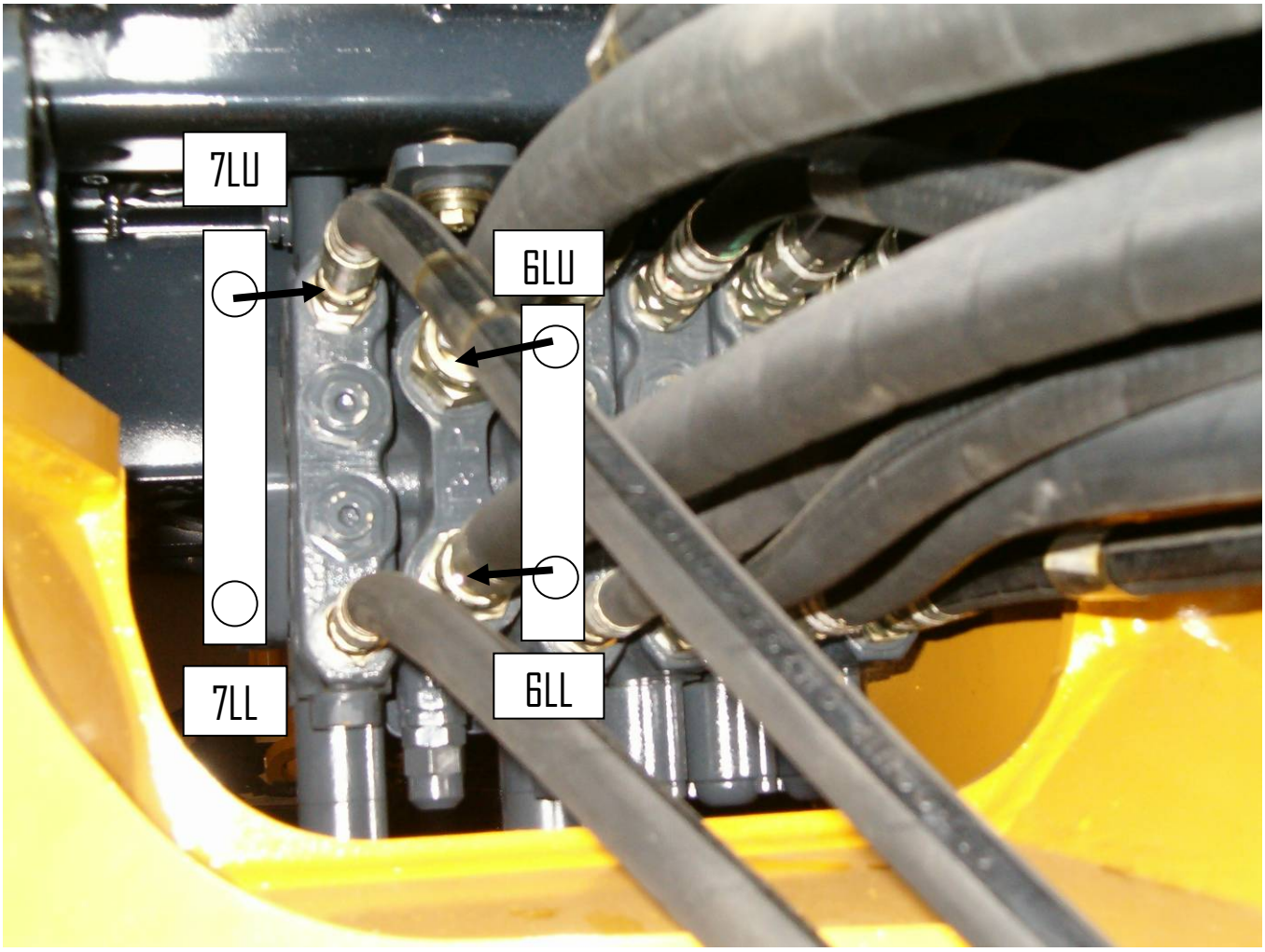
From Valve Section 7R, Upper Port (7RU):
7090257 Elbow
7110700 Hose 50"
7090235 Elbow
To Bulkhead Position 2

From Valve Section 7R, Lower Port (7RL):
7090283 Adapter
7090404 Elbow
7110700 Hose 50"
7090404 Elbow
To Bulkhead Position 1

Note: All hoses & fittings on this page are included in kits 7082004 & [7082051 or 7082107] (see Tables 7 & 9).

FIGURE 17 – Hydraulic Plumbing, JD 'G' Right Hand Combination Valve Tank Port to Henke Bulkhead Plate

(For 'G' Graders with Wing Valve Sections on RIGHT Side. Doesn't include 'GP' Graders.)



From JD Combination Valve "T" Port (Figure 18)
7090223 Tee
7110699 Hose 48"
7090235 Elbow
To Bulkhead Position 3

From Valve Section 7L, Upper Port (7LU):
7090290 Adapter
7110701 Hose 105"
7090235 Elbow
To Bulkhead Position 2

From Valve Section 7L, Lower Port (7LL):
7090283 Adapter
7110701 Hose 105"
7090235 Elbow
To Bulkhead Position 1

From Valve Section 6L, Upper Port (6LU):
7090290 Adapter
7110701 Hose 105"
7090235 Elbow
To Bulkhead Position 4

From Valve Section 6L, Lower Port (6LL):
7090290 Adapter
7110701 Hose 105"
7090235 Elbow
To Bulkhead Position 5

Note: All hoses & fittings on this page are included in kits 7082003 & [7082051 or 7082107] (See Tables 7 & 8).

FIGURE 18 – Hydraulic Plumbing, JD 'G' Left Hand Valve Workports to Henke Bulkhead Plate

(For 'G' Graders with Wing Valve Sections on LEFT Hand Side. Doesn't include 'GP' Graders.)

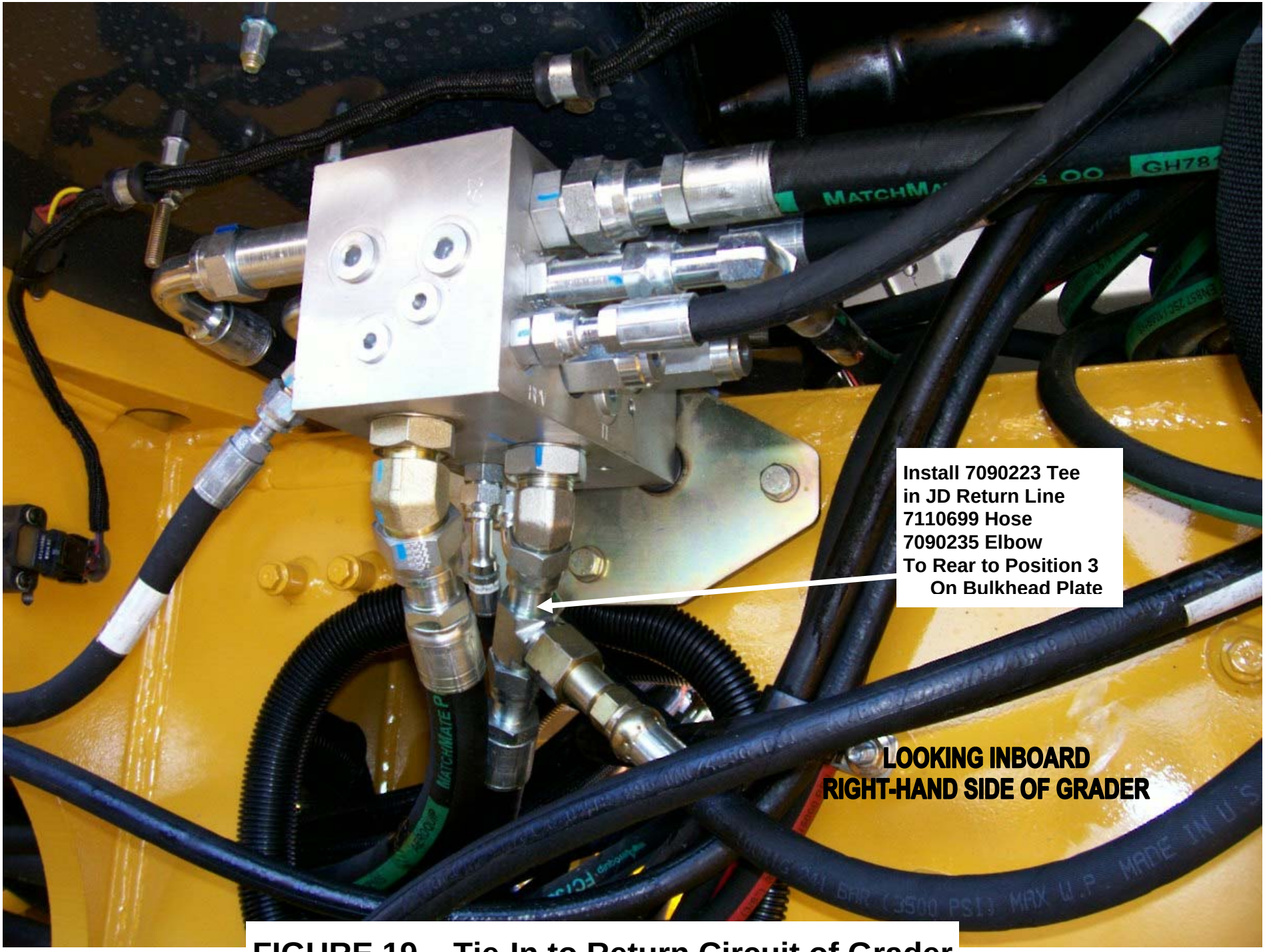


FIGURE 19 – Tie-In to Return Circuit of Grader

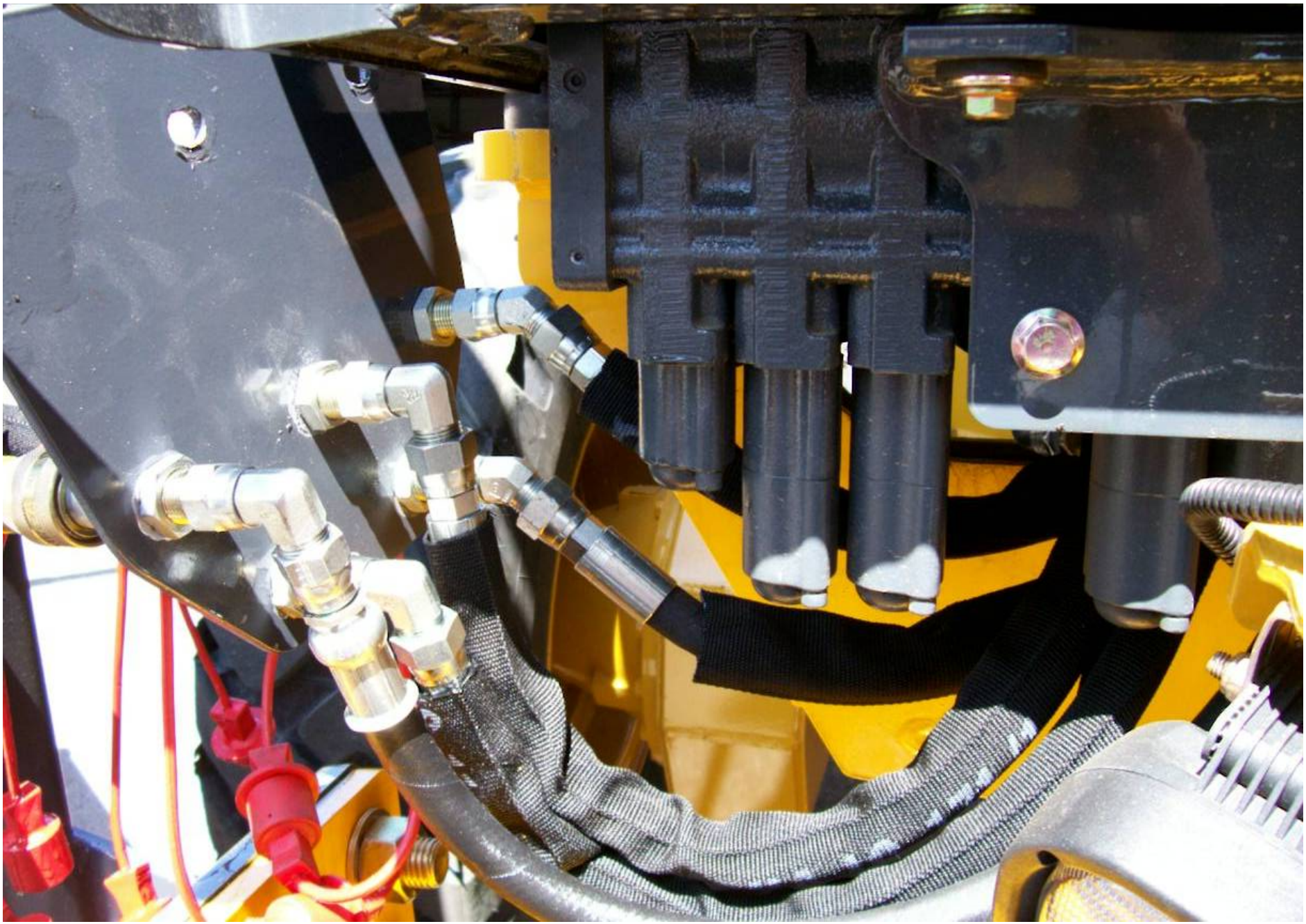


FIGURE 20 – Bulkhead Plate Hydraulics, Inside View

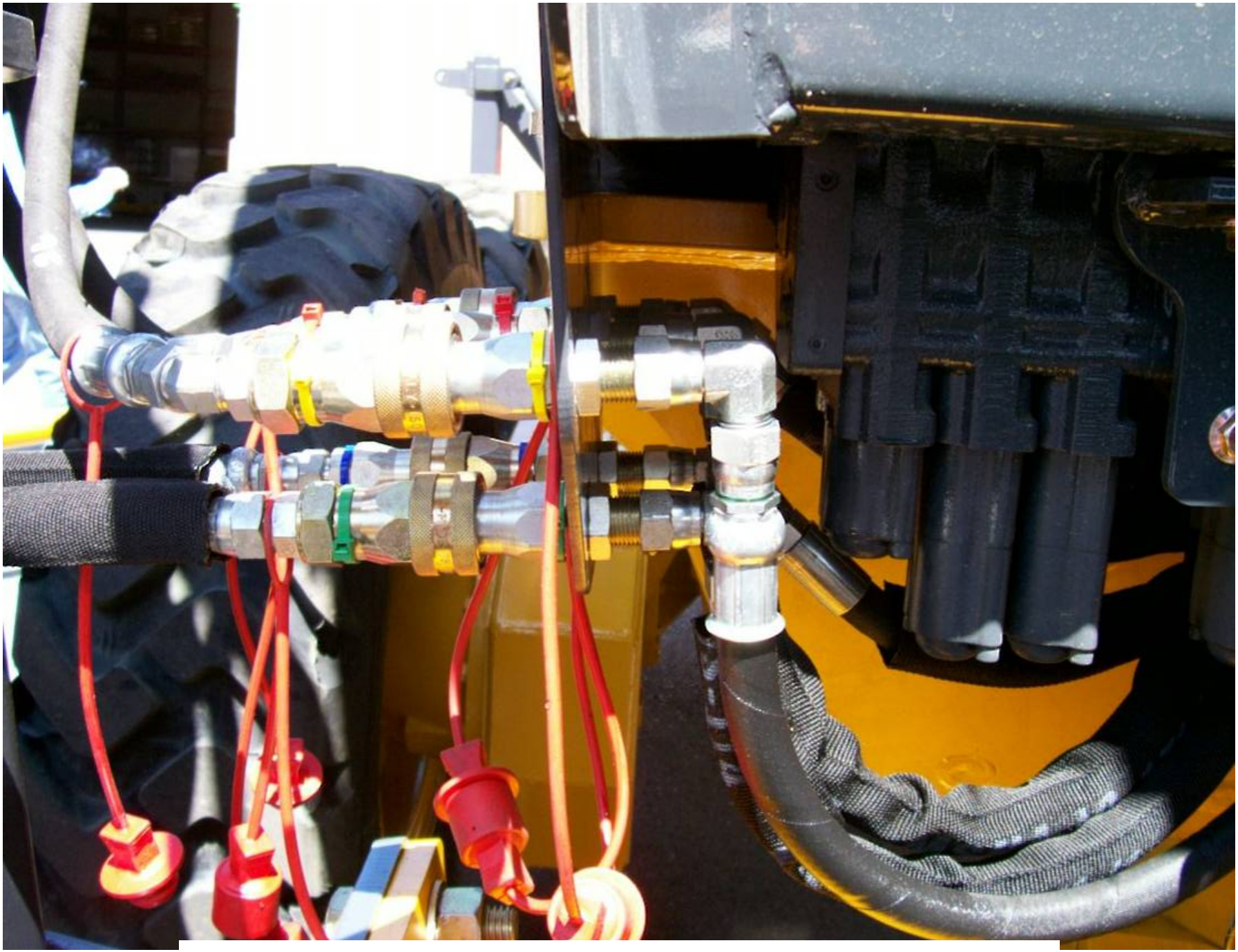


FIGURE 21 – Bulkhead Plate Hydraulics, Front View

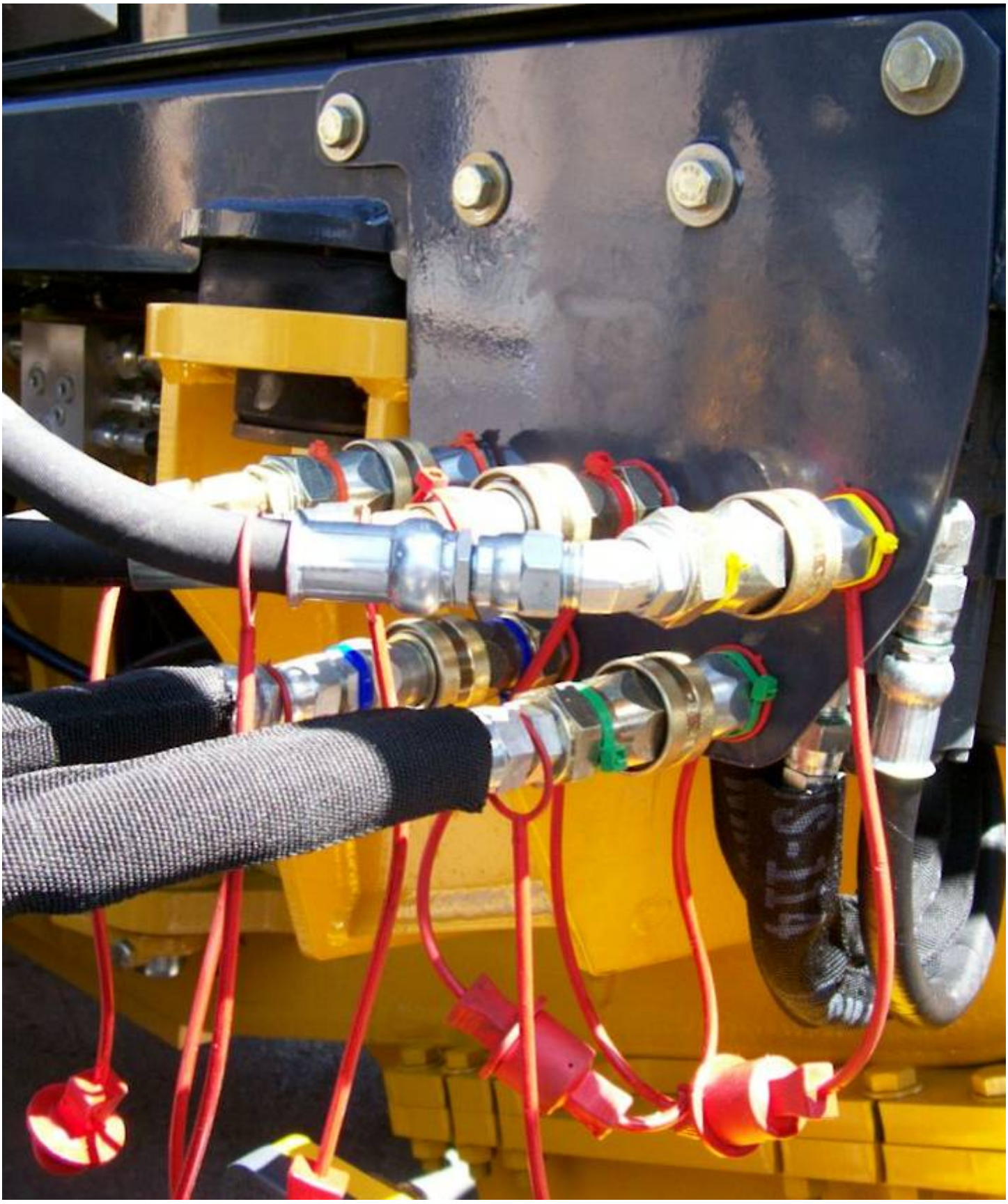


FIGURE 22 – Hydraulic Attachment at Bulkhead Plate

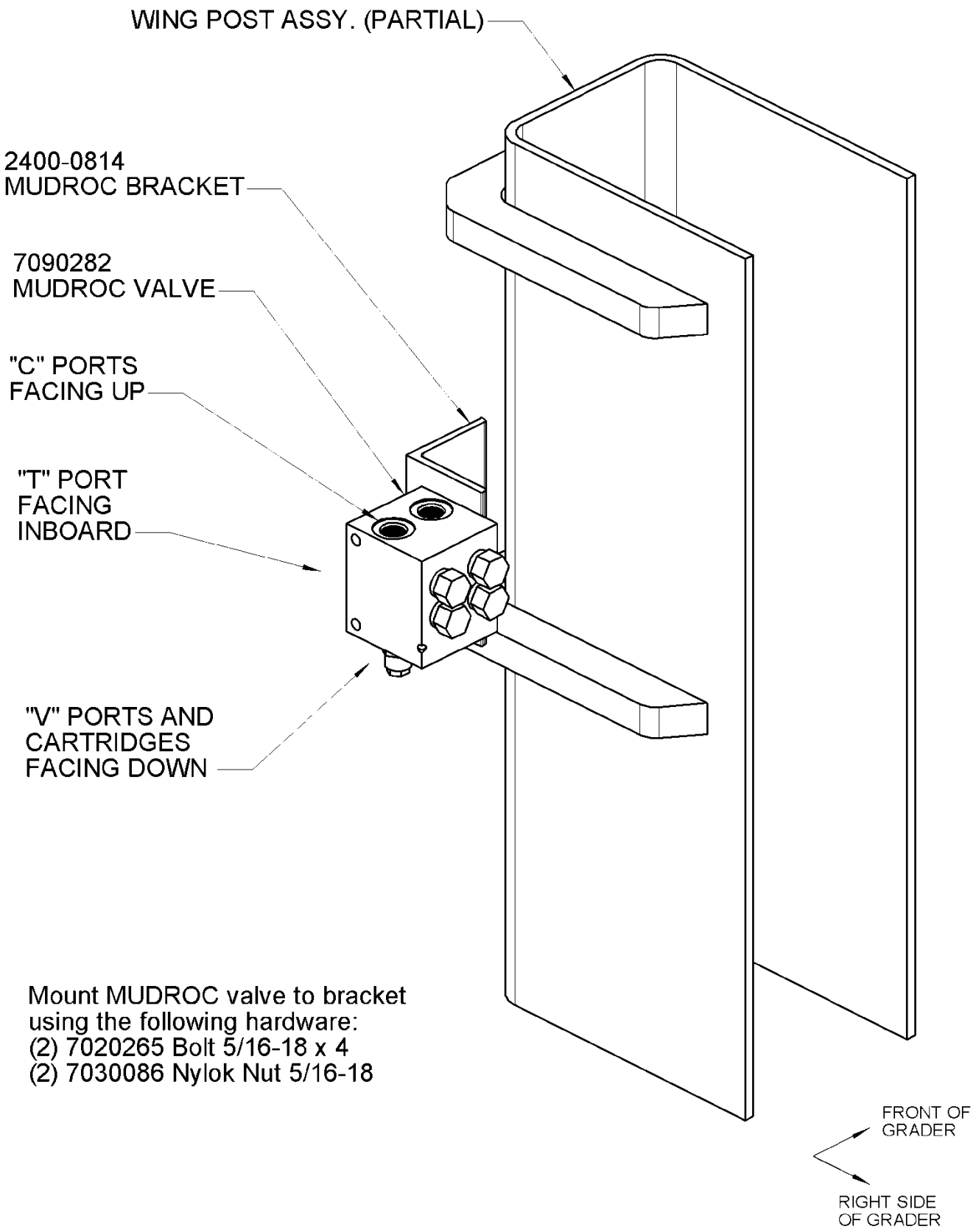


FIGURE 23 – Mounting of MUDROC Valve on Wing Post

FIGURE 24 – Looping of Hoses on Rear of Wing Post

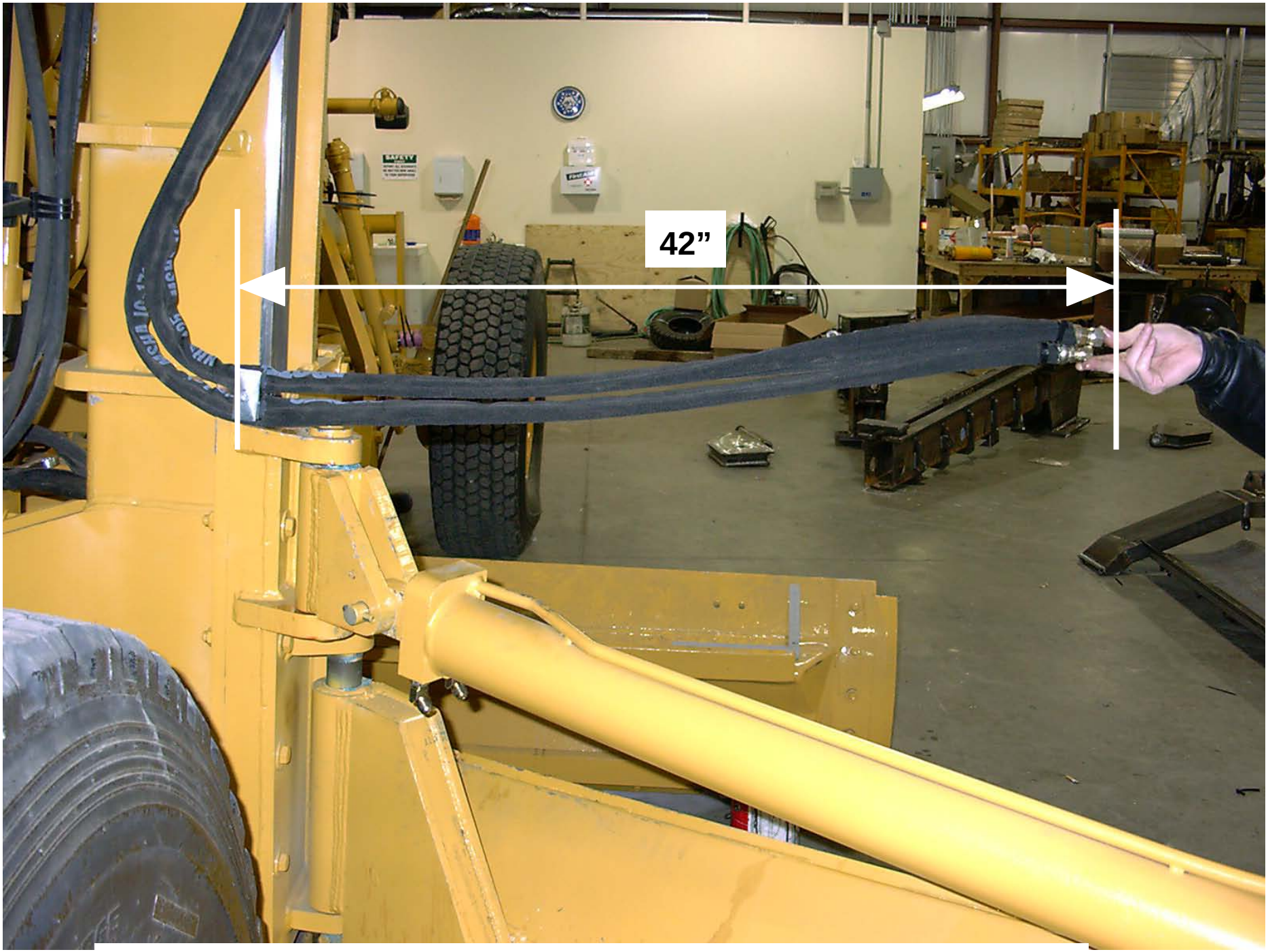
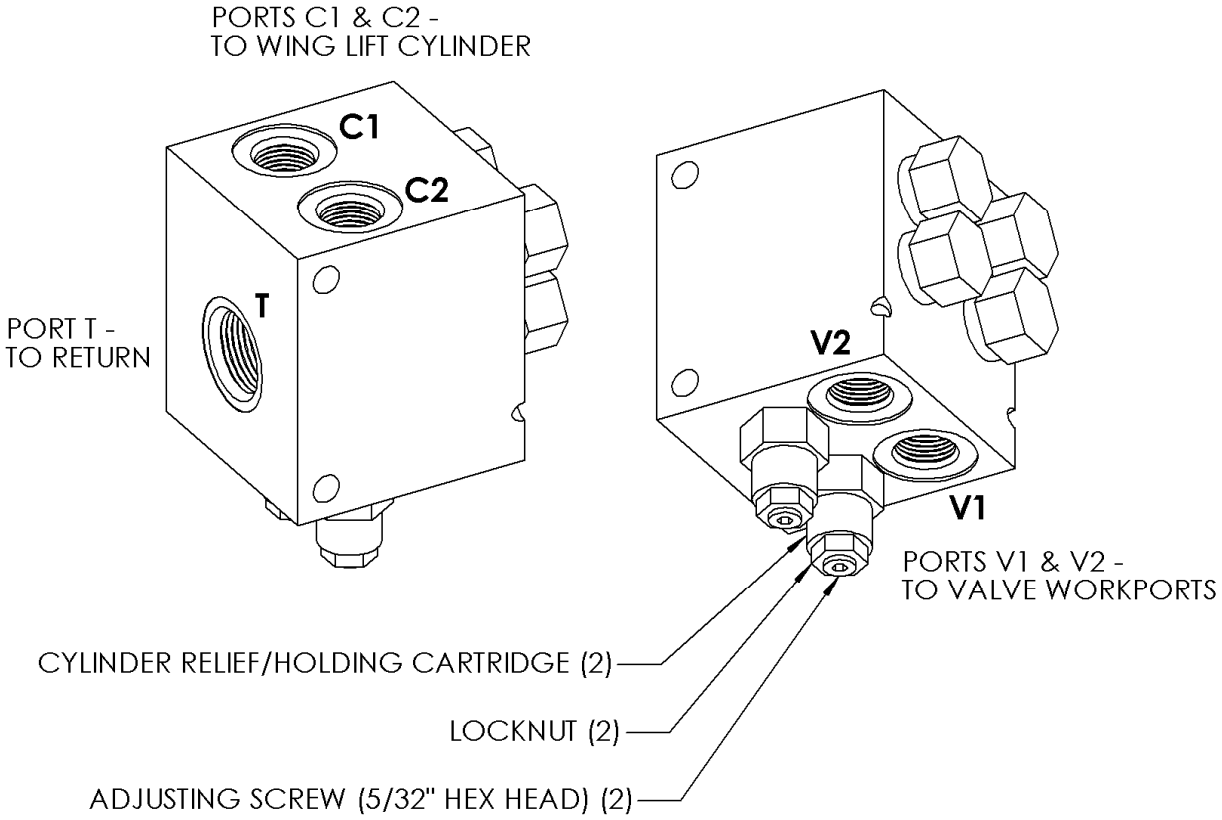


FIGURE 25 – Attachment of Hoses to Clamp on Wing Slide

WARNING: MUDROC valve must be installed and MUST be adjusted per instructions below. Failure to properly adjsut MUDROC valve could result in product failure which could cause injury or death.



ADJUSTING WING CYLINDER LINE RELIEF
(LIFT CYLINDER ROD END PRESSURE):
- Raise wing (approx. 3 feet high, approx. parallel to ground).
- Loosen locknut on end of valve cartridge (plumbed to rod end of lift cylinder).
- Turn adusting screw "in" (clockwise) until wing begins to drift down.
- Turn adjusting screw back out approx. 3/4 turn. This will set line relief at approx. 1600 psi.

ADJUSTING WING CYLINDER DOWN PRESSURE RELIEF
(LIFT CYLINDER BARREL END PRESSURE)
- Lower wing so that cutting edge length is touching the ground.
- Loosen locknut on end of valve cartridge (plumbed to barrel end of lift cylinder).
- Turn adjusting screw "in" fully. Back adjusting screw out approx. 1/2 turn. This will set wing outboard downpressure at approx. 500 psi.

FIGURE 26 – MUDROC Relief Valve Adjustment

TABLE 8 – Cylinder Hose Kit for 66” Benching, Wing Slide & Lift Cylinders

Note: This is Part 1 of 2. Kit 7082003 or 7082004 is also required.

Henke Kit No. 7082051

Qty.	Henke Part No.	Description
3	7110716	Hose Assy., 26", -8 JIC F e/e
2	7110684	Hose Assy., 36", -8 JIC F e/e, Nylon Sleeve Full Length
2	7110605	Hose Assy., 98", -8 JIC F e/e, Nylon Sleeve Full Length
1	7110699	Hose Assy., 48", -8 JIC F x –10 ORFF F Nylon Sleeve Full Length
1	7090223	Tee, -10 ORFF M, -10 ORFF Swivel F Run
11	7090290	Straight Adapter, -8 JIC M x –8 ORB M
5	7090419	Bulkhead Fitting, -8 JIC M x -8 ORB M
3	7090283	Elbow, 45, -8 JIC M x –8 JIC Swivel F
5	7090543	QC M, ISO 7241-A, 1/2” Body Size, -8 ORB, Poppet
5	7090544	QC F, ISO 7241-A, 1/2” Body Size, -8 ORB, Poppet
5	7090405	Dust Plug
5	7090406	Dust Cap
1	7090117	Elbow, 90, -8 JIC M x –10 ORB Adj. M
2	7090014	Straight Adapter, -8 JIC M x –10 ORB M
2	7090009	Cap, -8 JIC
1	7090493	Clamp Pair (must be marked “3087” or “7/8T”)
1	7090429	Cover Plate
1	7020277	Bolt, 5/16-18 x 1.75, Gr. 2, Zinc Plated
3	7210016	Nylon Tie, .30 x 8", UV Black
6	7090404	Elbow, 45, -8 JIC M x -8 JIC F
8	7090235	Elbow, 90, -8 JIC M x –8 JIC Swivel F
1	7090257	Elbow, 90, -8 JIC M x -8 ORB Adj. M

Note:

1. All hoses are 1/2” 2-wire braid.
2. All hose assembly lengths are total lengths which include the fittings.

TABLE 9 – Cylinder Hose Kit for 42” Benching, Wing Slide & Lift Cylinders

Note: This is Part 1 of 2. Kit 7082003 or 7082004 is also required.

Henke Kit No. 7082107

Qty.	Henke Part No.	Description
3	7110716	Hose Assy., 26", -8 JIC F e/e
2	7110684	Hose Assy., 36", -8 JIC F e/e, Nylon Sleeve Full Length
2	7110562	Hose Assy., 78", -8 JIC F e/e, Nylon Sleeve Full Length
1	7110699	Hose Assy., 48", -8 JIC F x –10 ORFF F Nylon Sleeve Full Length
1	7090223	Tee, -10 ORFF M, -10 ORFF Swivel F Run
11	7090290	Straight Adapter, -8 JIC M x –8 ORB M
5	7090419	Bulkhead Fitting, -8 JIC M x -8 ORB M
3	7090283	Elbow, 45, -8 JIC M x –8 JIC Swivel F
5	7090543	QC M, ISO 7241-A, 1/2” Body Size, -8 ORB, Poppet
5	7090544	QC F, ISO 7241-A, 1/2” Body Size, -8 ORB, Poppet
5	7090405	Dust Plug
5	7090406	Dust Cap
1	7090117	Elbow, 90, -8 JIC M x –10 ORB Adj. M
2	7090014	Straight Adapter, -8 JIC M x –10 ORB M
2	7090009	Cap, -8 JIC
1	7090493	Clamp Pair (must be marked “3087” or “7/8T”)
1	7090429	Cover Plate
1	7020277	Bolt, 5/16-18 x 1.75, Gr. 2, Zinc Plated
3	7210016	Nylon Tie, .30 x 8", UV Black
6	7090404	Elbow, 45, -8 JIC M x -8 JIC F
8	7090235	Elbow, 90, -8 JIC M x –8 JIC Swivel F
1	7090257	Elbow, 90, -8 JIC M x -8 ORB Adj. M

Note:

3. All hoses are 1/2” 2-wire braid.
4. All hose assembly lengths are total lengths which include the fittings.

TABLE 10 – Cylinder Hose Kit for Wing Slide & Lift Cylinders

for JD "G" Series Graders with the Wing Valve Sections on the LEFT Hand Side
Note: This is Part 2 of 2. Kit 7082051 is also required.

Henke Kit No. 7082003

Qty	Part No.	Description
4	7110701	Hose Assy., 105", -8 JIC F e/e, Nylon Sleeve Full Length

Note: All hoses are 1/2" 2-wire braid.

TABLE 11 – Cylinder Hose Kit for Wing Slide & Lift Cylinders

for JD "G" Series Graders with the Wing Valve Sections on the RIGHT Hand Side
Note: This is Part 2 of 2. Kit 7082051 is also required.

Henke Kit No. 7082004

Qty	Part No.	Description
4	7110700	Hose Assy., 50", -8 JIC F e/e, Nylon Sleeve Full Length

Note: All hoses are 1/2" 2-wire braid.

TABLE 12 – Elevating Rear Hose Kit, JD "G" Grader

Henke Kit No. 7082050

Qty	Part No.	Description
1	7110789	Hose Assy., 3/8 x 40 1/2T", -6 ORFF F x -6 JIC F, Nylon sleeve full length
1	7110790	Hose Assy., 3/8 2-wire x 37 1/2T", -6 ORFF F 45° X -6 JIC F, Nylon Sleeve full length
2	7090709	Straight Adapter, -8 ORFF F x -6 ORFF M
2	7090373	Straight Adapter, -6 JIC M x -8 ORB M
1	7090428	Clamp Pair, 3/8 2-Hose
1	7090429	Clamp Cover Plate, 3/8 2-Hose
1	7020011	Hex Capscrew, 5/16-18 x 1.25 GR. 2

Note: All hoses are 1/2" 2-wire braid.

TABLE 13 – Dry Torque Values (Ft.-Lbs.) - for Toplock (All-Metal) or Nylock Nuts ONLY (See Page Notes)

Bolt Size (in.)	Grade 2 Bolts	Grade 5 Bolts	Grade 8 Bolts
1/4-20	4	6	8
5/16-18	7	11	13
3/8-16	11	17	24
1/2-13	28	44	55
5/8-11	50	84	110
3/4-10	95	150	185
7/8-9	140	220	270
1-8	205	330	430

DO NOT USE THIS TABLE FOR NON-LOCKING NUTS

TABLE 14 – Dry Torque Values (Ft.-Lbs.) for Standard Non-Locking Nuts ONLY (See Page Notes)

Bolt Size (in.)	Grade 2 Bolts	Grade 5 Bolts	Grade 8 Bolts
1/4-20	5.5	9	12.5
5/16-18	11	18	26
3/8-16	20	33	46
1/2-13	50	80	115
5/8-11	100	160	225
3/4-10	175	280	400
7/8-9	175	450	650
1-8	270	675	975

DO NOT USE THIS TABLE FOR LOCKING NUTS

Page Notes:

1. “Dry” means plain or zinc-plated fasteners without any lubrication.

2. Fastener Grade Identification:
   a. Grade 8 bolts are identified by having (6) radial marks on the top of the bolt head. Grade 8 nuts are identified by having radial marks on (2) adjacent corners.

   b. Grade 5 bolts are identified by having (3) radial marks on the top of the bolt head. Grade 5 nuts are identified by having radial marks on (2) NON-adjacent corners.

   c. Grade 2 bolts and nuts are identified by having (0) radial marks.

TABLE 15 – Henke Standard Cutting Edges

6" STEEL	1/2" THICK	5/8" THICK	3/4" THICK
2FT.	Call	7150119	7150189
3FT.	7150153	7150120	7150073
4FT.	7150154	7150129	7150072
5FT.	7150007	7150184	7150026
6FT.	Call	Call	7150004
7FT.	Call	Call	7150028
8FT.	7150172	Call	Call
9FT.	Call	Call	7150036
10FT.	7150008	7150090	7150197
11FT.	7150009	7150089	7150031
12FT.	7150010	7150082	7150032

CP 6" STEEL	1/2" THICK	5/8" THICK	3/4" THICK
3FT.	7150186	Call	Call
4FT.	7150187	Call	Call

CP 10" STEEL	1/2" THICK	5/8" THICK	3/4" THICK
10FT.	Call	Call	7150050

CARBIDE	3/4" THICK
3FT.X5" TALL	Call
3FT.X6" TALL	7150035
3FT.X8" TALL	7150163
4FT.X5" TALL	7150123
4FT.X6" TALL	7150025
4FT.X8" TALL	7150164
5FT.X8" TALL	7150097
6FT.X6" TALL	7150124

8" STEEL	1/2" THICK	5/8" THICK	3/4" THICK
2FT.	7150039	7150077	Call
3FT.	7150037	7150078	Call
4FT.	7150038	7150079	Call
5FT.	7150011	Call	7150054
6FT.	7150005	7150081	7150055
8FT.	7150012	Call	7150042
9FT.	7150013	7150045	7150046
10FT.	7150014	7150043	7150047
11FT.	7150015	7150040	7150048
12FT.	7150016	7150044	7150049

CP 8" STEEL	1/2" THICK	5/8" THICK	3/4" THICK
3FT.	7150021	Call	Call
4FT.	7150022	Call	Call
10FT.	7150017	Call	7150171
11FT.	7150018	7150169	Call
12FT.	7150019	7150056	Call

RUBBER Notes 5&6	1 ½" THICK X10" Tall CP	RETAINING STRIP
8FT.	3500-0008	3500-0026
9FT.	3500-0009	1300-2223
10FT.	3500-0010	1300-0394
11FT.	3500-0011	1300-0395
12FT.	3500-0012	1300-0396
14FT.	3500-0014	1300-0401
16FT.	3500-0016	1300-0402

SNOW BASKET	1" THICK X10" Tall CP
8FT.	7150052
9FT.	7150053
10FT.	7150088

NOTES:

1. For Cutting Edges Not Listed Call Henke Manufacturing at 1-888-682-9010.

2. Except as noted, all cutting edges have 1.5" gauge line (distance from top edge to center of holes)

3. "CP" = Center Punched

4. All edges shown are punched for 5/8" bolts.

5. For rubber cutting edges, 6" tall center punched steel edges, Items 7150186 & 7150187 may be used to provide proper support behind the rubber edge.

6. Henke's rubber cutting edges feature a minimum tensile strength of 2000 psi and a maximum DIN rating of 150, and last much longer in service than lower quality rubber cutting edges available from some other suppliers.

7.Polyurethane cutting edges also available - call for price and availability.

TABLE 16 – Henke Standard Cutting Edge Hardware

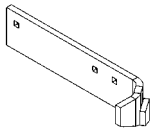
TYPE	LENGTH	PART NO.	USES/NOTES
PLOWBOLTS 5/8-11 GRADE 8	2” 2 ½” 3” 3 ½” 4” 4 ½” 5” 6”	7150001 7150003 7150002 7150103 7150105 7150106 7150108 7150107	FOR STANDARD CUTTING EDGES AND WEAR GUARDS
CARRIAGE BOLTS 5/8-11 GRADE 8	3” 4” 5” 6”	7020280 7020287 7020359 7020363	FOR SOME WRAPAROUND CURB GUARDS (SQUARE HOLES, NOT COUNTER SUNK)
HEX BOLTS	4” 4 ½” 5”	7020064 7020128 7020295	RUBBER AND POLY CUTTING EDGES (USE NYLOCK NUTS ONLY)
TOPLOCK NUT 5/8-11 GRADE C	N/A	7030084	USE WITH STEEL OR CARBIDE CUTTING EDGES
NYLOCK NUT 5/8-11 GRADE 8	N/A	7030095	USE WITH RUBBER OR POLY CUTTING EDGES

TABLE 17 – Henke Standard Curb Guards & Wear Guards

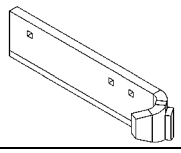
Wrap-Around Curb Guards, Steel

	7150122	6”, Left
	7150121	6”, Right
	7150117	8”, Reversible

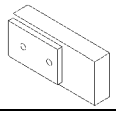
Wrap-Around Curb Guards, Chrome-Carbide Weld Deposit on Wrap-Around Corner

	7150125	6”, Left
	7150126	6”, Right
	7150115	8”, Left
	7150118	8”, Right

Wrap-Around Curb Guard + Wear Guard,
Chrome-Carbide Weld Deposit on Wrap-Around Corner + on Bottom Wear Edge

	7150113	6”, Left
	7150114	6”, Right
	7150130	8”, Left
	7150131	8”, Right

Bolt-On Curb Guards (Bolts to Outside of End Rib)

	139-1046	Bolt-On Guard Assy.
	1300-1633	Optional spacer (Required for Tripedge applications)

<u>Henke Wear Guards and Wear Shoes</u>

Wear Guards, Standard Length (9”), with Chrome-Carbide Weld Deposit
(Mount in front of cutting edge)

	7140106	6”, Reversible
	7140107	8”, Reversible

Wear Guards, Long Length (21”), with Chrome-Carbide Weld Deposit
(Mount in front of cutting edge)

	7140108	6”, Reversible
	7140008	8”, Reversible

Cast Wear Shoes

(Mount behind cutting edge)

	7140004	Wear shoe for 6” cutting edges, or 8” center-punched edges
	7140002	Wear shoe for 8” cutting edges

Bottom Angle Saver (Mount behind of Bottom Angle)

	199-0280	Bottom Angle Saver with Carbide Strip

HENKE

LIMITED WARRANTY

1. LIMITED WARRANTIES

1.01. Henke warrants for one year from the purchase date to the original non-commercial, governmental, or municipal purchaser ("Purchaser") and warrants for twelve months to the original commercial or industrial purchaser

1.02. Manufacturer will repair or replace for the Purchaser any part or parts found, upon examination at one of its factories, to be defective under normal use and service due to defects in material or workmanship.

1.03. This limited warranty does not apply to any part of the goods which has been subjected to improper or abnormal use, negligence, alteration, modification, or accident, damaged due to lack of maintenance or use of wrong fuel, oil, or lubricants, or which has served its normal life. This warranty does not include normal wear items such as cutting edges, wear guards, scarifier teeth, etc. or improper installation. HMC warranty for any purchased components, such as hydraulic cylinders will be superceded by, and equal to the component manufacturer warranty.

1.04. Except as provided herein, no employee, agent, Dealer, or other person is authorized to give any warranties of any nature on behalf of Manufacturer.

2. REMEDIES AND PROCEDURES.

2.01. Warranty claims must be filled within 30 days of repair work during the one year warranty period and will be honored only if the completed warranty registration form has been returned. Henke reserves the right to require proof of purchase of original Henke replacement parts. If warranty is approved any allowed shipping expenses will be based on and will not exceed standard base shipping charges.

2.02. Purchaser claims must be made in writing to the Authorized Dealer ("Dealer") from whom Purchaser purchased the goods or an approved Authorized Dealer ("Dealer") within 30 days after Purchaser learns of the facts on which the claim is based.

2.03. Purchaser is responsible for returning the goods in question to the Dealer.

2.04. If after examining the goods and/or parts in question, Manufacturer finds them to be defective under normal use and service due to defects in material or workmanship, Manufacturer will:

(a)Repair or replace the defective goods or part(s) or

(b)Reimburse Purchaser for the cost of the part(s) and reasonable labor charges (as determined by Manufacturer) if Purchaser paid for the repair and/or replacement prior to the final determination of applicability of the warranty by Manufacturer.

The choice of remedy shall belong to Manufacturer.

2.05. Purchaser is responsible for any labor charges exceeding a reasonable amount as determined by Manufacturer and for returning the goods to the Dealer, whether or not the claim is approved. Purchaser is responsible for the transportation cost for the goods or part(s) from the Dealer to the designated factory.

3. LIMITATION OF LIABILITY.

3.01. MANUFACTURER DISCLAIMS ANY EXPRESS (EXCEPT AS SET FORTH HEREIN) AND IMPLIED WARRANTIES WITH RESPECT TO THE GOODS INCLUDING, BUT NOT LIMITED TO, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

3.02. MANUFACTURER MAKES NO WARRANTY AS TO THE DESIGN, CAPABILITY, CAPACITY, OR SUITABILITY FOR USE OF THE GOODS.

3.03. EXCEPT AS PROVIDED HEREIN, MANUFACTURER SHALL HAVE NO LIABILITY OR RESPONSIBILITY TO PURCHASER OR ANY OTHER PERSON OR ENTITY WITH RESPECT TO ANY LIABILITY, LOSS, OR DAMAGE CAUSED OR ALLEGED TO BE CAUSED DIRECTLY OR INDIRECTLY BY THE GOODS INCLUDING, BUT NOT LIMITED TO, ANY INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES RESULTING FROM THE USE OR OPERATION OF THE GOODS OR ANY BREACH OF THIS WARRANTY. NOT WITHSTANDING THE ABOVE LIMITATIONS AND WARRANTIES, MANUFACTURER'S LIABILITY HEREUNDER FOR DAMAGES INCURRED BY PURCHASER OR OTHERS SHALL NOT EXCEED THE PRICE OF THE GOODS.

3.04. NO ACTION ARISING OUT OF ANY CLAIMED BREACH OF THIS WARRANTY OR TRANSACTIONS UNDER THIS WARRANTY MAY BE BROUGHT MORE THAN TWO (2) YEARS AFTER THE CAUSE OF ACTION HAS OCCURRED.

4. MISCELLANEOUS.

4.01. Proper Venue for any lawsuits arising from or related to this limited warranty shall be only in Leavenworth County, Kansas.

4.02. Manufacturer may waive compliance with any of the terms of this limited warranty, but no waiver of any terms shall be deemed to be a waiver of any other term.

4.03. If any provision of this limited warranty shall violate any applicable law and is held to be unenforceable, then the invalidity of such provision shall not invalidate any other provisions herein.

4.04. Applicable law may provide rights and benefits to purchaser in addition to those provided herein.

KEEP FOR YOUR RECORDS

ATTENTION: Purchaser should fill in the blanks below for his reference when buying repair parts and/or for proper machine identification when applying for warranty.

Henke Implement Model _____ Serial Number _____

Date Purchased _____ Dealer _____

ATTENTION:

READ YOUR OPERATOR'S MANUAL

HENKE MANUFACTURING
An Alamo Group Company
3070 Wilson
Leavenworth, KS 66048
888-682-0300

Dealer Warranty Procedure

For units delivered within the past 12 months, report any warranty problems needing repair to our Product support department. Please have information ready regarding:

1. Henke unit model and serial number,
2. Model of equipment Henke unit is attached to (prime mover)
3. Description of the problem and any helpful information by the end user. (Photos are always helpful).

Measurements or photos may be requested by Henke engineering for any issues regarding prime mover proximity and clearance, or any other unique considerations of fit and adaptability. These may be necessary for a proper repair recommendation and procedure.

Henke will respond with a written labor hour allowance for Henke participation on a faxed claim form and will ship any required replacement parts. If necessary, a repair procedure will be included on the claim form. A parts invoice will be generated to confirm shipment of the replacement parts.

If defective parts are needed for analysis, Henke will request their return.
Any such returned items are to be labeled with the **claim number** and returned to:

Henke Manufacturing Corp.
ATTN: Product Support
3070 Wilson Ave.
Leavenworth, KS. 66048
RGA#_____

The dealer should perform repairs as agreed on a dealer warranty repair order. Return the claim form with a copy of the dealer warranty repair order and service report. Credit as agreed will be issued to the dealer upon receipt of the dealer warranty repair order invoice (Pro-forma invoice), and upon receipt, inspection and warranty confirmation of the returned parts if any.

Parts & Service Assistance

Parts and service assistance is available, Monday through Friday, from **8:00 am** to **5:00 pm, CST. Call 913-682-9000.**

Our web site, **www.henkemfg.com**, is a quick source for parts pricing, and many common parts diagrams.

Parts purchase orders may be faxed in at any time to **913-682-0300**. Faxed orders are encouraged, as they help insure order accuracy and follow up. Include any special instructions, such as drop ship addresses on your order.